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AGRICULTURE THE STANDARD OF CIVILIZATION.

A people may be known by its agriculture.—The greater the variety and quantity and perfection of their agricultural productions, the more they are advanced in civilization. The very culture of plants and animals produces cultivation in the farmer. It is a study, a profession, which is elevating, instructing, civilizing. One cannot cultivate flowers or birds, without being improved. The habits and necessities of the flower, plant or animal, must be studied,—and studying these is a science. It is the study of Nature; and whoever knows Nature well, must know much that is useful and elevating. Scientific men and women study chemistry, botany and natural history with great profit and delight. But these may be practically studied in the culture of the soil. Let intelligence direct agriculture, let science guide it, and let it be pursued with high motives and no profession can be more useful, improving, or dignified.—As we improve the agriculture of a country, so we elevate its people and dignify their lives.—This is the place to begin. To make good gardens, orchards and farms, is to make good people. To produce fine animals, plants, fruits, flowers in great abundance, variety and perfection, is to produce the elements of true civilization. There can be no permanent civilization not grounded in the knowledge peculiar to agricultural pursuits. The farmer, then, is at the fountain head of our civilization. He embitters or sweetens the waters that flow from him. To improve him is to improve the whole. To add anything to the improvement, or dignity, or efficiency of his profession, is to benefit the whole community. We cannot, then, do or say too much for the farmer. We cannot urge him too earnestly to attend to all the aids and improvements in his calling. We cannot press too much upon his attention the importance of his applying himself wisely and diligently to the great interests of his profession.

WESTERN AGRICULTURE.

In no portion of our extended country have the people been favored with a more prolific soil, than in that part usually embraced in the great Valley of the Mississippi river and her tributaries. The costly manures required at the East to raise a fair crop, as a general rule, are entirely unnecessary here. Nature seems to have designed this portion of our country as the great garden spot of the world. And with proper cultivation, it is able to produce enough to supply, not only the wants of the people of America, but of the old world besides. Even now, when not a hundredth, nay, not a thousandth part, of our resources are developed, we are feeding the masses of the eastern and southern portions of our continent, and many of the inhabitants of Europe besides.

Not only in Europe, but in the older settled portions of our own country, has the soil been tested, to its fullest capacity; and it has been found inadequate to feed its own people, much less to supply any foreign marts. It becomes, then, a grave question, as to where we must look for a supply of food for the world? The dense population of Europe must look for a supply of the necessaries of life, somewhere, and that must be to our own country. They cannot depend upon the eastern part of our continent, for already it is dependent upon us. We say the West is the great garden spot which is to supply these wants. Every year there will be a greater demand for our products. Western farmers! a bright future awaits you! Open your farms; cultivate them well; have no fears that there will not be a demand, at high prices, for all your produce.

THE NEW YEAR.

In paying our farewell respects to the old year, we should not do it without a thoughtful consideration of what it has done for us and what we have done for ourselves. We should be especially careful to review our errors and mistakes, our failures and losses, that we may know how in future to avoid a recurrence of similar misfortunes. What have we learned, what have we done, what has been of benefit to us? What improvement have we made, what errors in opinion and habit have we given up? Take it all in all, what has the old year done for us, and what is most necessary that the new should do for us? What are our most pressing necessities in our business, in our homes, in our minds, in our hearts? These necessities we should look to the new year to supply, so far as one year can supply our wants. As we take the old year by the hand to bid him farewell we should greet the new with hope. We all feel that there are many things which the new year may do for us, and we ought to know what these are, and resolve, that if within our reach, and proper to have, our best endeavors shall be used for their attainment. Our first business is to lay out our year's work,—to determine what we ought to do and how we ought to do it. January should be the grand seed-month for the year. Our plans, designs and drawings should all be made as far as may be. Our best resolutions should be formed. We should determine what we should be and do, wherein we should change our life, what are our evil habits, our besetting sins, our weakest points, and resolve on amendment as heroically as a General resolves on victory in the morning of battle. There is much in beginning right. Our success depends not a little upon it. January is a good month for reflection, for planning, for resolving. Resolve must precede action. Thought must go before deed. We cannot act wisely without reflection or live wisely without good resolutions.

The farmer should determine in January what should be done on his farm during the year,—should lay his plans, prepare his forces, secure his means, and so far as may be, get everything ready for active operation in this month. It is preparation month. All that he has should be set in order for the year. What he has not, and must have, should be secured. Tools, implements, seeds, plans, help, and whatever can be got ready for the spring operations belong legitimately to that month. How many let January wear out their tools more than July, because they are not kept housed and in order. How many waste more than they wear out, for want of the order and attention we are recommending. January is a hard month on men and stock and tools, unless they are well taken care of. The odds and ends must be looked after this month. The little things must be attended to. The buildings set in order; little repairs made, and everything snugged up in its place. The year's fuel should be made ready and if possible put under cover. How unfarmer-like to chop wood in July. How unwise to let spring come with no stock of fuel well prepared for the year. There is no more important month in the year than this. Every farmer may make it valuable in preparations. A year would lack a month without January; so the farmer lacks a month in the year who does not put it to its proper work of preparation.

In an intellectual and moral point of view, January is important to everybody. It is resolution month; it is a time for self-examination, reformation, for a trial of virtues and habits. Improvement should be the aim of all. All have some habits and errors that they should get rid of. January is a good month to prepare for the crusade against them. They ought to be rooted out. They ought to be driven to the moles and bats.

Then this is a good reading month. Its evenings are long; its labors are not hard; much good reading may be done. The mind may be quickened, the heart made strong, the moral sense elevated, the whole inward man made brave and strong.

Old and young, one and all, may make January one of the most useful months of the year, as well as one of the pleasantest. It is the beginning of the year, and should be right, right in all respects. Knowing that it is right, according to Crocket, we may *go a-head.*

WINTER SHELTER FOR FARM ANIMALS.

The advantages of protecting farm stock from the rain, sleet, and chilling blasts of winter, in stables and sheds, are not so well understood and so highly appreciated in the West, as among the more prosperous class of Eastern farmers.

The custom of suffering cattle to run at large in all kinds of weather during winter, without some place where they can find shelter, to say the least of it, shows a great want of economy. Cattle well protected from the cold and storms of winter, will enter upon the grass in spring, in good condition, while those exposed, if brought out alive, will appear mere skeletons, and will lose half the summer in regaining the flesh they have lost during winter.

A large, expensive Pennsylvania barn is not

required, in our western climate, for the protection of stock, but very simple and cheap sheds may be erected, with materials within the reach of every farmer, which will answer all the necessary purposes. This may be done by setting two rows of posts six feet high, with forked tops, and ten or twelve feet apart. In the forks lay poles on the line of the posts; across these, other poles or old rails may be laid, forming a roof, upon which a quantity of straw may be piled sufficiently high to turn off the rain.—Around the north, or exposed sides, old rails or slabs from the sawmill, may be placed on end; thus securing cheap and comfortable protection to stock during the severe storms of rain, snow and winds of the winter season. These sheds will last several years, and the saving each winter, will be equal to many times the cost.

BEES.

In elden times, the promised land was said to be flowing with milk and honey. The homes of many of our farmers may be said to be literally flowing with milk; but how few are flowing with honey. Cows are plenty—but where are the bees? Wild in the woods, hiding their sweet treasures beyond our reach. Why are they not tamed, domesticated? Bees are as useful as chickens, and as easily raised. They afford us a luxurious food—healthy, and might be cheap. Bees require no feeding, little expense and attention. They want only a comfortable home, covered from the storm and sun and protected from the marauding millers. They will make their own living, and do considerable towards the living of the farmer. Not many swarms can be prosperously kept in one place, but every farmer may raise honey enough for home use and a little to spare. Every gardener, every villager, might do it. A single swarm of bees, well attended to, will soon produce as many swarms as can be successfully kept in one place. All that bees make is clear gain. They get their treasures from flowers. We should have bees enough in the country to have one always sipping at every flower. The flower is all the time producing honey. The bee should be all the time gathering it. If we had a bee all the time at every flower, honey enough would be produced to supply the world. It is a means of wealth, health and pleasure. Let bees be cultivated,—let every farmer have them. They are as useful as cows, and far less trouble. A little attention will teach one to manage them.

100 pounds of wheat flour contain 90 pounds of nutritive matter and 10 pounds of water.

AGRICULTURAL LYCEUMS.

It is quite usual during the winter season, for the inhabitants of country neighborhoods, to form Moot Legislatures, Debating societies, &c. We approve this manner of spending the time, if they are properly conducted, and believe they are productive of much good. But we are of the opinion that if, instead of discussing the questions generally entertained by these societies, the members would discuss agricultural questions, it would result in far greater benefit. And the object of this article, is to call the attention of the members of these societies, and also of our readers generally, to the importance of discussing agricultural topics. And we would recommend the farmers of every neighborhood, to form a Lyceum, having for its object the discussion of agricultural questions. There are but few farmers who think alike. Each has his own method of cultivation. It may be right or wrong—but he thinks it right, and if it is wrong, he is as much attached to it, as though it were right. In such cases a discussion would be most beneficial. The keen, practical sense of the farmers present, would soon form a pretty correct opinion, as to which pursued the right, and which the wrong course. Nor could the farmers of any neighborhood attend these discussions without great benefit. And agriculture being their pursuit, it is a subject upon which they are better informed than any other, and one too, upon which they need more information. Being familiar with the subject, they would feel little or no hesitation in presenting their views.—When one feels that he thoroughly understands his subject, he has but little difficulty in expressing himself clearly and forcibly.

The officers of these societies need be but few in number. A President, Secretary and Treasurer are all that are required. The question for discussion should be selected at a preceding meeting, so that those who participate, may have an opportunity to arrange their thoughts and be prepared for the discussion. The object of the discussion should be truth, not victory. Everything should be conducted with the utmost fairness and courtesy. Those who participate in the discussion should follow one another in order,—first on one side and then upon the other. Some journals recommend these discussions to be held by the members in their seats. We think it better for them to rise and express themselves.—By this means they are preparing themselves to speak elsewhere. We know no reason why farmers should not cultivate the speaking faculty, as well as any other profession. They are compelled to do it in self-defense. Unless they have

the power of expressing their views and sentiments, to their fellow citizens, their merits will be entirely overlooked. Other professions are elevated to office to their almost total exclusion. Our farmers should be the legislators of the land. And if they will but qualify themselves, the day is not far distant when they will be.

We feel that in recommending the formation of agricultural lyceums, we are touching upon a subject of very great importance. We hope they may be very generally formed, and believe they would be productive of the most beneficial results.

Such organizations would be beneficial, not only on account of the information imparted, but also in many other respects. The members must become more or less conversant with parliamentary rules. A knowledge of these is valuable to every citizen. But the mental improvement of the members, must also be great. In order to discuss any subject properly, a man must reflect upon his subject carefully. He must examine it in all its aspects. The preparation for discussion therefore, cultivates thought. But it is in the practice of speaking, that he derives the greatest benefit. No exercise cultivates so great a number of faculties. The judgment, the memory, language, imagination, in fact, all the faculties of the mind are brought into powerful exercise. We hope our readers will take this subject into careful consideration. We know that if our suggestions are followed, much good will result.

ICE-HOUSES.

A supply of ice in the summer, is no longer regarded as a mere luxury, to be enjoyed by the few, but it is now classed among the indispensable articles of health, comfort and convenience, in almost every family, and a well constructed ice house is one of the necessary appendages to every rural dwelling.

As the season is now approaching for laying in a store of ice, we propose to say something upon the best and most economical method of constructing ice houses.

The most common practice in the country is, to build ice houses under ground. But experience has demonstrated that ice will keep best in houses made entirely above ground.

The large commercial ice houses in Boston, and those in the warmer climates of the south, are built above the surface. An ice house under ground, affords greater facilities for filling than one above ground; but when a favorable situation can be obtained near the dwelling, so as to place the ice house against the side of a bank or rising ground, so that the ice may be unloaded from the upper side of the hill, both these advantages may in part be secured. In building an ice house, one important requisite must always be secured, viz: thorough drainage, and at the same time so as not to admit air through the bottom of the house. If the soil is porous or sandy, it will generally afford sufficient drainage without any other outlet, but if the soil is of a retentive, clayey character, other means of drainage must be resorted to; for if the water is retained in the soil, or rises so as to come in contact with the ice it will melt rapidly.

Ice well packed, in a house well constructed, melts on the surface of the mass only; therefore, the larger the mass of ice is, the less will be the proportion of waste, and for the same reason a cube is the most perfect form in which ice can be packed to prevent waste, and a cube of less than ten feet will not keep ice through the summer.

The large commercial ice houses of Boston, are constructed upon a plan furnished by N. J. Wythe, Esq., of Cambridge, Mass. These houses are built entirely above ground, with double walls, in the following manner: Posts of locust, or some other durable timber, are set in the ground at proper distances apart, forming the size the house is desired. Another row of posts is placed outside of these, leaving a space between the rows two and a half feet apart at the bottom and two feet at the top. These posts are planked up on the inside, and the space between is filled with tan-bark or saw-dust; pulverized charcoal is better, it being a less conductor of heat.

The bottom of the house should be filled about one foot deep with blocks of wood; these are leveled off and covered with wood shavings, on which a strong plank floor is laid to receive the ice. Upon the beams above the ice a light floor is laid and covered several inches deep with saw-dust or tan-bark. The roof or the house should have a considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window in each gable end, or something equivalent to pass out the warm air which will accumulate beneath the roof. An opening should also be made in the floor, above the ice, a few inches square, in which a tube should be inserted and extend one or two feet above the floor.

In packing ice, if the blocks or pieces are turned the other side up from which the ice is formed, it will keep much longer than when not

turned over. This is probably owing to the fact that ice in freezing is more or less porous, and these pores are closed on the upper surface and are open on the underside, and when placing the ice in the house the same side up that it is formed, the water will run from the pores, and its place will be filled at once with air, which will hasten the decay of the ice.

CULTURE OF MUSTARD.

A subscriber asks for information upon the subject of the Cultivation of Mustard, and inquires what is the usual price in market.

Two species of mustard are cultivated—both are annuals,—the *sinapis alba*, is used for sallad, for the manufacture of oil, as an ingredient in pickles and medicines; and *S. Nigra* or black mustard, is principally used as a condiment known by that name.

For a field crop, the Nigra is mostly cultivated. It requires a fine, rich, loamy soil, rather moist than otherwise; it should be plowed deep and finely pulverized; it should be planted as early in the spring as the ground can be prepared—otherwise, in this climate, the ground is liable to become too dry and hard for the tender plant to force its way through the crust.

The land should be marked off about the usual distance for corn. An abundance of seed should be dropped in each hill, which will enable the young plants in their united strength to break the crust. The seeds should not be covered more than from a quarter to half an inch deep.

At the time of the first hoeing the plants should be thinned to half a dozen in each hill, and afterwards the number should be reduced to three, standing as wide apart as they can be left, in a triangular form. The subsequent cultivation may be with the plow or cultivator, as in a crop of corn.

We know some farmers who cultivate from three to ten acres each, consecutively for years on the same ground, and never sow the seed, but the crop is continued by self-seeding. The plants often make considerable growth in the fall, and being quite hardy, withstands the winter frosts. In the spring they are thinned to the proper distance, and cultivated with the hoe or plow.

The crop should be cut as soon as the pods turn yellow, for if allowed to fully ripen, most of the seed will be lost in handling. If cut quite green the stalk will afford sufficient nourishment to fully ripen the seed.

When cut it should be placed on sheets, under cover from the rain, and when thoroughly dry, it should be threshed with flails.

The yield per acre varies in different climates and in different seasons. The ordinary yield, is from fifteen to twenty-five bushels per acre. In cooler climates, the crop may be considered somewhat more certain and productive.

Manufacturers usually pay from $2 50 to $3 50 per bushel for it.

For the Valley Farmer.

TAKING AN AGRICULTURAL JOURNAL.

MR. COLMAN:

With your permission, I desire through the columns of the *Valley Farmer*, to call the attention of the farmers of the West to the importance of taking an agricultural journal.

In theology, in law, and in medicine, we find journals well sustained by the members of these professions; and it is important that each of the above professions should have journals devoted exclusively to the spread of information appertaining to their respective vocations. It is the only way that new discoveries and valuable improvements can be made known to the profession at large. By the aid of these journals no member need be ignorant of what is going on in his profession the wide world over. And is not the member of any of the professions above alluded to, who sustains these journals, who keeps up with the intelligence of the age, whose mind is ever taking in the best and latest information, better qualified to discharge the duties of his profession, than he whose mind is not enlightened by this information? Which of the two would any thinking man prefer? Of course it would be the one whose mind was informed upon all the latest improvements and discoveries in his profession.

Now the farmer, also, belongs to a profession, the oldest, and most honorable in the world.—Are there no improvements and discoveries being made in his profession? Is there no further advancement to be made in agricultural science? Has the farmer nothing more to learn? Notwithstanding the profession of agriculture is as old as the everlasting hills, yet the *science* of agriculture is but in its infancy. Not a day passes by, but some valuable discovery is made. The work of months, by the aid of agricultural machinery, lately invented, is now performed in days. The ingenious mind of man is still at work, and ever will be, devising new and greater improvements. In a few years we will look back upon the implements now in use, and think how bungling they are, and wonder how they ever could have been used.

The farmer should take an agricultural journal, not only for the purpose of informing himself of these improvements in agricultural implements, machines, &c., but also for the purpose of becoming acquainted with what is going on in the agricultural world generally. The farmer will derive great benefit from this. He will read of new experiments in the mode of cultivating crops, fruit, &c., which, if put into practice, may be worth the cost of the journal for which he subscribes, a thousand times over.

It is the duty of every farmer to be well informed in his profession. It is true he learns much from his own practice and observations, and perhaps, if he would give his experience to others, they might be greatly benefited thereby. But it is not enough that he learns from his own experience; he may also be greatly benefited by the experience of others. Farmers should not hesitate to give their experience to their brother farmers. And I am glad to see that they are beginning to do it. One farmer may benefit thousands in this manner.

It would take me a long time to enumerate all the advantages of an agricultural journal.—Farmers must have some useful reading, and what can be better for them than that which pertains to their own pursuit? No farmer should neglect the cultivation of his mind. It is the noblest power given him, and it is his highest duty to educate and develope it. Not only will an agricultural journal aid him in doing this, but it will also have a most beneficial effect upon his children. They need reading, and good reading, and if they are to be farmers, how important it is that they should be intelligent farmers—that they should know something of the profession to which they belong.

AGRICOLA.

AN EXTRAORDINARY HAWK.—Mr. W. Jardine, draper of this town, has for some time been in possession of a hawk. A few months ago she laid two eggs, soon after which she sat upon them; her own eggs, however, were subsequently removed, and two guinea fowl's eggs placed in the nest. The hawk sat upon them the usual time, when to the surprise of all, two fine chickens were hatched, with which their step-mother appeared highly delighted, and over which she continued to watch with all the tenderness of a natural parent; the only thing at which she appeared uneasy, and evidently showed surprise, was the fact of her young "picking up" the moment they were hatched, and many were the efforts she made to induce them to offer their bills, that she might cram in pieces of raw meat. We consider this circumstance well worth the attention of the naturalist.—*Dunstable, Eng. Chronicle.*

ORDER.

"A place for everything and everything in its place"—belongs to, and should be classed with the most important rules appertaining to the every-day concerns of life.

As a rule of action, it is universal in its character and application, and is as effective in controling the operations of the world, as its twin-sister—"A time for everything, and everything in its time."

These two, so intimately connected as to be incapable of separation, constitute a principle absolutely essential to the good order and governance of the world at large.

We are so accustomed to observe the effect of their operation in the beautiful works of Nature—in the government of the Universe of God—that we regard it as a matter of course, and forget that it is a principle as invariable as God himself.

When our attention is called to the subject, we readily concede the necessity of the most perfect order in the management and government of everything connected with the great works of creation, and that without it, we would soon see "the wreck of matter and the crash of worlds"—soon return to a state of chaos. But we seem to disregard entirely, the application of this principle in our own government, and in the prosecution of the general business of life.

All else, except man and the subjects of his control, is observant of, and governed by this principle; he alone is its habitual violator. This is observable in the every-day associations of life, and we are necessarily led to the inquiry—Why is this so? Why is it that man, "the perfect handiwork," the "express image of God," should violate all the rules established by his Creator for his government, and bring upon himself all the evils consequent therefrom?

It is essential to the health and happiness of man, that these rules should be observed; and a disregard of them, is as injurious of the one, as it is destructive of the other.

It is equally important to man's general prosperity, and the successful accomplishment of his objects in life, that they should be followed; and a failure to do so, will as certainly defeat him in his undertakings, as the violation of the laws of nature, will produce the results consequent thereon.

Order, is a necessary element in the success of every man, but in no class, is its strict observance more requisite than with the Husbandman.

Show us a farmer who is orderly in the location, management, construction, preservation

of his buildings, in the erection and maintainance of his fences, in the division of his farm into lots, in the selection, planting, and care of his fruits trees, in the preparation and cultivation of his soil and the putting in of his seed, in the rotation of his crops, in the management of his stock, in the purchase and care of his farming implements, in the preparation of his fuel, in the curing and marketing of his products, in short, one who is governed by these rules—"A time for everything, and everything in its time"—"A place for everything, and everything in its place"—and we will show you an intelligent, successful, prosperous and happy man; when on the other hand, as a general rule, you will find the man who neglects the observance of these rules, presenting a picture directly the opposite of all this. Who among us will not choose order, with its attendants, which are intelligence, success, prosperity and happiness, rather than the opposite, with the evils consequent thereon.

From the Genesee Farmer.

THE BEE MOTH.

Mr. Editor: There have been many ways suggested to prevent the ravages of the bee moth, and no doubt each way has been practised with some degree of success; still it is doubtful whether any method has yet been discovered by which we may entirely prevent their disturbing the rightful occupant of the hive.

On raising the hive we may find the moth snugly located under its edges, and in every crevice in the bench or board upon which the hive stands; thus being prepared to sally forth and commit their depredations whenever a suitable opportunity may occur. And if unmolested, they will continue to multiply and gain strength until they gain full possession of the hive and its contents.

But they may be destroyed in great numbers by the following means:—Raise the hive an inch from the bench by placing small blocks under its corners, and carefully fill every crevice in the bench, thus depriving them of their favorite locations, altogether. Then take a little board, say three by six inches, and one-half inch in thickness, and with a knife or some other sharp instrument, cut it full of grooves on one side; let the grooves extend through half the thickness of the board. Thus prepared, slide it under the hive, the grooved side down. This furnishes the moth with exactly such a place as they desire, and all you have to do is to remove your trap from one to three times a week, and destroy what you find in it. Small rods of elder, divided lengthwise and the pith removed, will answer, though not as well as a board with grooves in it.

We do not claim greater merit for this remedy than any other known, but merely say, as it can be tested without the least expense, let all those who may have occasion or opportunity, give it a trial, and satisfy themselves whether it will pay to practice it or not. G. Garnsey.

ENGLISH BACON.

Americans visiting England are often struck with the superiority of English bacon over our own, particularly of that from Wilts and Yorkshire. It is believed that the difference is owing solely to the mode of preparation. We publish the following receipe as furnished by Mr. Browne, of the Agricultural Bureau of the Patent office. It is worthy of the attention of our agricultural readers:

"As soon as the bacon comes from the butcher's hands it should have a covering of salt, dried and rolled to a fine powder, well rubbed in with the hand to every part, using the finger to fill every hole and joint, as it is most important that the meat should take the salt when quite fresh. In twelve hours all the brine and damp salt not absorbed should be scraped off the bacon and removed from the vessel, and dry salt added again, as much as needed to cover it, as before, and well rubbed in. This process should be repeated every twelve hours for three days, when saltpetre should be added, getting off previously all the damp salt and brine as before, and applying the saltpetre as the common salt, adding a handful of the latter. A quarter of a pound of saltpetre to a side of bacon weighing seventy pounds is sufficient; then mix one pound of coarse brown sugar and one pound of treacle or molasses, and pour over the saltpetre on the bacon, adding a little more common salt daily for three days, which serves to make the pickle keep well, and the whole liquor should be ladled with a teacup over the bacon as often as convenient, four times a day for the first two weeks after it was first put to the bacon, and then never less than twice a day for the remainder of the time needed for its pickling, which is four weeks or longer if large bacon; and then it should be sent to the drying house, and smoked over a wood fire."

AGRICULTURE IN UTAH.

A writer at Salt Lake, speaking of the agricultural productions of Utah says:

"About two hundred and fifty bushels of peaches have been raised within the Territory this season; a few apples were also raised, and sold for twenty-five cents each. The sugar works have ceased operations in consequence of the failure of the beet crop. During the past summer the people of Provo have collected and manufactured several thousand pounds of what the Mormons, in their ecstacy, term 'manna sugar.' It consists of the secretions of honey dew on the surface of cottonwood leaves, giving them the appearance of having been glazed with honey. In many of the leaves, secretions of sugar resembling the sugar of milk, are formed. The hard sugar is generally shaken off, and the honey coated leaves soaked in water, which is afterwards boiled down. In the trees I have examined, almost every leaf has received a share of the sweets."

If you would be pungent, be brief; for it is with words as with sunbeams—the more they are condensed the deeper they burn.

WYANDOTT CORN.

We have received from Mr. J. C. Thompson, of Tompkinsville, Staten Island, N. Y., a full description of this new, and in some respects extraordinary variety of Indian corn, from which we condense the following:

Last spring he planted twenty four grains, procured from Mr. James R. Thomas, of Waverly, Ills., in hills four feet apart, one kernal in a hill. About the first week in May eighteen grains came up, which at first did not differ in appearance from the ordinary corn.—When about eighteen inches high, shoots (not suckers) began to spring up from the *roots*, to the number of seven in some hills. These secondary shoots soon outstripped the main stalk, and grew to the height of ten feet and over.—Up to the first week in August there was little prospect of any yield of corn, though there were incipient ears numbering as high as thirty on a hill.

During August those ears developed rapidly, so that 17 hills contained 82 stalks, bearing 123 good ears and 105 immature setts for ears, which our season is not sufficiently long to mature. All this resulted from only 17 kernels. One of the hills had six stalks, 13 mature, and 18 immature ears.

The corn was in an unfavorable location, being shaded on the east and west by trees which shut out the morning and evening sun. The rapid filling out and growth of ears in September, is represented as really astonishing to all who watched its progress. The peculiarity of the variety seems to be, first, a full development of stalks and leaves from shoots springing from the roots, and afterwards a rapid growth and maturing of the ears during August and September. Mr. Thompson states that he shall have some of the seed to dispose of.

He also forwards to us a copy of a letter from Mr. Thomas, dated Waverly, Ill., Aug. 17, from which we make the following extracts:

"My crop of Wyandott was planted at intervals between the 1st and 15th of May, on a flat piece of land which had been cultivated four years. A cold, wet spell of weather setting in about a week after planting, and continuing some two weeks, chilled the earth to such a degree that the seed was very tardy in its growth after coming up. A severe frost cut the stalk completely off, compelling me to replant about one half my crop. I also had the cutworm, the mole, and the field mouse to contend with, each of which attempted to outvie the other in their destructive pranks, and all of which were very pestiferous to farmers in this section the first of the season. But notwithstanding all these difficulties, my crop of Wyandott is pronounced by the farmers who have visited it, to be one of the greatest wonders ever witnessed by them. The stalk is about 12 feet high, as large in circumference as an ordinary man's wrist—averaging four stalks in a hill, and bearing from 8 to 20 ears, and some as high as 24 ears to a hill, and all from one grain. Why my dear sir, it looks or sounds Munchausen like, but it is here in my crop incontestably demonstrated; and if nothing unforseen occurs to prevent, will be witnessed by thousands of persons at our State Fair at Chicago, next October.

"I planted five acres and allowing for devastation before mentioned, I presume I shall have four acres to gather. My crop is filling out rapidly, though late. I noticed particularly in 1854, that the Wyandott matured much more rapidly than any other description growing, and this fact has been remarked to me by several this season. I sincerely hope it may prove so in your section. You are situated, I believe, in latitnde about 41°; we are in about 39° 40'—a slight difference in our favor. On the other hand, the difference in longitude being some 15°, is in your favor. However a short time will test to the satisfaction of all, whether it will answer your climate."—*Am. Agriculturist.*

MILKING.

Milking is quite an important operation in farming. Not many people can milk well who have not been bred to the business. A quick hand is required to draw all the milk from the udder—and when the milker is lazy or slow, the flow of the milk is checked—the cow becomes tired as we all are with a tedious and long speaker.

The milker should sit close to the cow, and should endeavor by all means to be on good terms with her—for if he scolds and kicks she will be quite likely to return the compliment.

Gentle treatment is quite important when favors are asked, and as we cannot require or command a cow to "give down" her milk we are obliged to resort to coaxing. It is well that it is so, for a majority of those who are entrusted with cattle are fond of arbitrary rule. And you will generally find that the loudest bawler for freedom among men is quite likely to be a tyrant among cattle.

Sit close, and let the left arm be in contact with the leg of the cow. Then she cannot set her foot into the pail if she is disposed to do it. She cannot kick while her leg is in contact with your left arm, for a blow requires space between the agent and the object.

The quickest is the best milker, for there will be a flow in less than a minute from the commencement of the process. Take advantage of this, and not let the milk flow back again. Milk out all that the cow will give, for the last of the milk, or strippings, is worth more than four times as much for butter as the milk that first comes. Still, the milker may sit too long to gather the strippings. By sitting too long the cow may contract bad habits and incline to accommodate herself to a lazy operation. Move the udder in every direction and imitate a calf that is in earnest for his supper and you may obtain all the milk that the cow can yield.

Gentleness and kindness are great virtues in the keepers of stock. Oxen as well as cows are won over by kind usage much sooner than by harsh treatment. We do not mean that the rod or whip lash should never be used, but we would use them sparingly. Cattle must be made to obey their driver, and a viscious cow must yield to discipline, but when a systematic course is pursued, not much whipping will be needed.—*Massachusetts Ploughman.*

THE GRASS LANDS OF ARKANSAS.

The growing of grass in Arkansas has, up to this time, received very little attention, and especially so, when compared with the great amount of fine meadow or pasture lands, which lie unoccupied and unobserved in the North-east quarter of the State. These lands are generally designated *slash, swamp or wet lands,* and are suitable for little else than stock and grass farms; but are eminently qualified for this business. These lands are to be had generally at 50 cents per acre, having been given to the State as swamp lands; and if cleared up, drained and well cultivated in clover, timothy and herds grass, would produce from 1500 to 3000 lbs. of good hay per acre, which could be sold on the ground for 75 cents per cwt. By the way, a much better business than our cotton farmers are doing on our best lands,—not requiring one-fourth the labor.

These lands may be classed in three classes, though nearly allied.

1. The ridge land, which lies low and level, but does not need ditching. The growth is yellow oak, post oak, hickory and some dogwood; yellow, spungy, clay soil; produces clover and timothy finely, and after grassing a few years, produces wheat, corn and oats well.

2. The post oak glade lands, are white, and appear very poor, but contain a good deal of lime; and although wet and soft, during the winter and spring months, they will produce from 1500 to 3000 lbs. of herds grass per acre. As fine hay as ever need be raised.

3. The slash land, proper, *all wet*, most of the year, needs draining and ditching, but much richer soil than either of the classes before mentioned. Growth of over-cup oak, scaly bark, hickory, ash, maple, and a shrub, which we call black spice. It will cost some trouble to put this class of land in cultivation, but once done, and it will never wear or depreciate much; and after grassing a few years will produce grain of any sort, or fine cotton.

Now, sirs, we have thought that many persons within your circulation would be pleased with such a country as we have tried to describe; where horses, mules, cows and hogs do well without attention; but how much would they improve, could we have a few of your experienced stock raisers and grass farmers, scattered through these lands. Here, too, is a ready market, at fair prices, for most of the stock and hay raised here—will not more than supply the cotton farms which are opened on the higher lands—but should there be a surplus, South Arkansas, Lousiana and Mississippi will always demand more than can be produced here, and will pay fair prices for horses, mules, hogs and hay; and in winter, if by our grass farms we were prepared to furnish good stall fed beef, we can supply the southern market, when northern beef cannot be shipped.

Now, sirs, these thoughts are thrown out to induce the settlement of our grass lands by farmers from a grass growing country, who may wish a mild climate and a wide opening for operation. The lands described are to be found in the counties of Mississippi, Crittenden, Phillips, Monroe, St. Francis, Poinsett, Green, Randolph, Lawrence, and Jackson—embracing a large scope of country for selection.—*Western Journal and Civilian.*

PROVERBS FOR PLANTERS.

[Farmers and others will heed the following, whatever they may think of book or fancy farming generally. They will direct the attention of their sons to these Universal Rules, and commend every one to follow them. We are indebted for most of them to that excellent manual, the *Illustrated Register of Rural Affairs*, every line of which is a text in itself for a more elaborate article.]

Never keep animals on a short allowance—if you starve them, they will starve you.

Although, in draining land thoroughly, your purse may be drained, yet the full crops that follow will soon fill it again.

Trying to farm without capital, is like trying to run a locomotive without fuel. Money and wood must both be consumed, if they are to move the machine of the farm, or of the rail.

Always give the soil the first meal. If this is well fed with manure, it will feed all else—plants, animals and man.

If you wish to give an energetic movement to all your farm machinery, and keep its hundred wheels in rotation, be sure not to be without a good rotation of crops.

If you allow your animals to shiver, your fortune will be shivered in consequence; that is, the farmer who leaves his cattle to the wind will find his profits also given to the winds.

Heavy carrot crops for cattle will soon return carrats of gold.

Did you ever hear the musical notes of a starving herd of hogs? Extinguish by food these notes speedily, if you would avoid even more annoying notes after pay-day has passed.

Fences operate in two ways: if good, they are a defense, if poor, an offense.

Many a farmer, by too sparingly seeding his new meadows, has had to cede his whole farm.

Every farmer should see daily every animal he has, and inspect its condition. Weekly visits, as with some, soon result in weakly animals.—*Life Illustrated.*

THE PAPER PLANT.—The Mineral Point *Tribune* has a description of a plant with the above name, discovered in Wisconsin, by Miss A. L. Beaumont. That lady describes it as follows:

"I discovered, two years ago, a plant which yields both cotton and flax from the same root, I believe I am the first person who ever cultivated, spun and knit from it. I am persuaded that any article that will make as good cloth as can be made from this plant, will make good paper; hence I call it the *Paper Plant.*

"It can be planted in the spring and cut in the fall or winter. It bleaches itself white as it stands, and will yield at least three or four tons to the acre. From a single root that I transplanted last spring, there grew twenty stalks, with three hundred and five pods containing cotton, with at least sixty seeds in each. From this root I obtained seven ounces of pure cotton and over half a pound of flax. It is a very heavy plant, and grows from six to seven feet high."

TEN REASONS FOR UNDER-DRAINING.

1. It prevents water which falls, from resting on or near the surface, and renders the soil dry enough to be worked or plowed at all times.

2. By rendering the soil porous or spongy, it takes in water without flooding in time of rain, and gives it off again gradually in time of drouth.

3. By preventing adhesion and assisting pulverization, it allows the roots to pass freely through all parts of the soil.

4. By facilitating the mixture of manure through the pulverized portions, it greatly increases its value and effect.

5. It allows water falling on the surface to pass downward, carrying with it any fertilizing substances (as carbonic acid and ammonia), until they are arrested by the absorption of the soil.

6. It abstracts in a similar manner the heat contained in the falling rains, thus warming the soil, the water discharged by drain-mouths being many degrees colder than ordinary rains.

7. The increased porosity of the soil renders it a more perfect non-conductor of heat, and the roots of plants are less injured by freezing in winter.

8. The same cause admits the entrance of air, facilitating the decomposition of enriching portions of the soil.

9. By admitting early plowing, crops may be sown early, and an increased amount reaped in consequence.

10. It economizes labor, by allowing the work to go on at all times, without interruption from surplus water in spring, or from a hard baked soil in summer.—*Illustrated Register.*

WORK, WORK!

I have seen and heard of people who thought it beneath them to work—to employ themselves industriously in some useful labor. Beneath them to work! Why, work is the motto of life; and he who accomplishes the most by his industry is the most truly great man. Aye, and is the most distinguished among his fellow creatures and his God—who so forgets the great blessings of life, as to allow his energies to stagnate in inactivity and uselessness, had better die; for, says the Holy Writ, "He that will work not, neither shall he eat." An idler is a cumberer of the ground, a weariness and a curse to himself as well as to those around him.

Beneath human beings to work? Look in the artist's studio, the poet's garret, where the genius of Immortality stands ready to seal his works with her ineffaceable signet, and then you will only see industry standing by her side.

Beneath human beings to work! What but work has tilled our fields, clothed our bodies, built our houses, raised our churches, printed our books, cultivated our minds and souls?—"Work out your own salvation," says the inspired Apostle to the Gentiles—*Cornish Banner.*

A TOMATO has been raised in Morgan county, Illinois, weighing over two pounds. The vine was trained to a pole, and kept well trimmed.

HEADING CABBAGES IN WINTER.

A number of our agricultural exchanges give the following method of making cabbages head in winter, which we hope is correct:—

"Select a suitable spot in a garden or field, six feet in width, of any desired length, free from standing water; run a furrow the proposed length of your bed, and throw a back furrow upon it. This double furrow will form a side wall of your cabbage house. Stand your cabbages in the trench, on their roots, leaning towards the furrow, at an angle of 40 to 45 degrees. Let the next furrow be thrown upon the roots and stalks of the cabbages, and another row be placed in the trench made by the second furrow; thus proceed until your six feet of width is planted, then let the last furrow be a double one—making the other side wall about the height of the cabbage head. Through the whole length of the middle of the patch lay rails lengthwise, supported by crutches, at the height of about two feet from the cabbages; this will form the ridge of the cabbage house. Lay light brushwood from the side walls to the ridge pole; then throw on salt hay, or bog hay, or straw, two inches in depth. As the cold weather advances, throw on dirt till you have a depth of, say six or eight inches, or even more, when the winters are severe; and finally, spank the dirt roof with the flat of a spade until it will shed rain. Fill up two ends of your house in the same manner—leaving only small air holes of a foot or two in diameter, which may be closed with hay. The length of the house should be on a north and south line.

In the early spring you will find your most unpromising plants have heads of their own, and all will be thriving and fresh."

PACKING BUTTER.—We are requested to give the best mode of packing butter, in order to be kept sweet during the summer. It is well known that the first step to success in producing good butter, is to work out all the buttermilk. We cannot expect butter to keep well that is not well made. The next step is to see that your butter is packed in tubs made of wood that will not impart its flavor to the butter, and last exclude all air from it, and success is certain. We annex a receipt for preserving butter, used in Scotland with great success. The Scotch are noted for their good butter.—*Northern Farmer.*

"Take two quarts of the best common salt, one ounce of sugar, and one ounce of this composition for one pound of butter, work it well into the mass, and close it up for use. Butter cured with this mixture appears of a rich and marrowy consistence and fine color, never acquires a brittle hardness nor tastes salty. Dr. Anderson says: 'I have eaten butter cured with the above composition that has been kept for three years, and it was as sweet as at first.'—It must be noted however that butter thus cured requires to stand three weeks or a month before it is used. If it is sooner opened, the salts are not sufficiently blended with it, and sometimes the coolness of the nitre will be perceived, which totally disappears afterwards."

How to Distinguish Mushrooms.

Edgar Sanders, in the Country Gentleman, says that he knows of no description better than that of Loudon's, by which it may be easily known, which is as follows:

"It is most readily distinguished, when of middle size, by its fine pink or flesh colored gills and pleasant smell; in a more advanced stage, the gills become of a chocolate color, and it is then more apt to be confounded with other kinds of dubious quality; but that species which most nearly resembles it, is slimy to the touch, and destitute of the fine odor, having rather a disagreeable smell; further, the noxious kinds grow in woods, or in the margins of woods, while the true mushroom springs up chiefly in open pastures, and should be gathered only in such places."

The time of gathering, depends on the use they are required for; the "buttons" are often asked for, for stews; middle size are good for any purpose, while the old and dark ones, are prepared for catsup.

To Make Catsup.—Put the mushrooms in a dish, sprinkling a little salt between each layer; let them stand a week, then strain through a coarse cloth or sieve; add whole pepper, cloves and ginger, bruised, and placed in muslin bags, to suit the taste. Boil for two hours; allow it to get quite cold, then strain again if requisite; bottle and cork tight, and keep in a cool place.

To Stew Mushrooms.—Peel and put into a saucepan, with water enough to keep them from burning; add a little salt, and stew slowly till quite tender; just before taking up, add butter, pepper, spices and wine, or cream if desired.—Serve on buttered toast.

To Pickle Mushrooms.—Stew and prepare as above; take up when tender, and put them in scalding vinegar, spiced with mace, cloves and peppercorns. Add a little salt before bot-tling.

Husk Beds.—As each autumn has returned, for several years past, we have advised all corn growers to save their husks for under beds, believing they are the very best substance for this purpose that is or can be used. They should be the inner husks, clean and whole, and spread on some airy floor for a few days in order that they may become perfectly dry. Then they may be put into the ticks, and they will last for many years. We have some of these under beds now in our house which have been in use more than twenty years; and with an annual ventillation and beating, by being emptied on a chamber floor, and with a little replenishing with new husks, they are now as lively and as good as when new. The husks had better not be stripped up as some have done. This makes the substance finer and more liable to mat up. Let the husks be whole, and drying in irregular shapes, they will retain those shapes and lie lively in the bed for a long time. There is a beard, or furziness, on each husk, that prevents any insects crawling through the beds; consequently they are entirely free from vermin, of which straw is apt to be full. They are, therefore, clean, sweet and healthy. A good husk bed is equal to the best mattrass for summer use, and we have slept in feather beds in winter not half so soft as these.

The best time to save the husks is when in the act of husking the corn. By a little practice, the husker will soon learn how to strip off first the outside, coarse husks, and by another motion, seize the inner ones, (removing the silks at the same time,) and dropping them into a basket at his side. It will take a little longer to husk out a bushel of corn so, but the husks will most richly repay for the extra time. When this process has been omitted, it will not be a great job to visit the husk pile after the corn is removed, and by hand, pick out enough of the clean, inside husks to make a bed. We consider such a bed worth a five dollar bill.—After being made, there is no need of ever go ing after straw with which to fill the under beds. The job once done, is done for life.—*Drew's Rural Int.*

THE WONDERFUL RAINING TREE.

The Island of Hierro is one of the most considerable of the Canaries, and it is conceived that its name Hierro, which is Spanish for iron, was given to it upon this account—that its soil, not affording so much as a drop of fresh water, seems to be iron, and indeed there is in this island, neither river nor rivulet, well nor spring, save that only towards the sea there are some wells; but they lie at such a distance from the city that the inhabitants can make no use thereof. But nature remedies this inconvenience in a most extraordinary manner. For in the midst there is a tree, which is the only one of the kind, inasmuch as it has no resemblance to any of those known to us. The leaves of it are long and narrow, and continue in constant verdure, winter and summer, and their branches are covered with a cloud which is never dispelled, but resolving into a moisture, causes to fall from its leaves a very clear water, and that in such abundance that the cisterns which are placed at the foot of the tree are never empty, but contain enough to supply man and beast.

Cause and Effects of Poor Milk.—The milk of cows kept stabled, or where the phosphate of lime becomes exhausted, is putrid and when examined through a microscope, contains globules of corrupted matter, which is only eaten because generally unknown to exist. The effects of it on infants and children who use it daily for food, is weakness, sickness and premature death.—A child might as well be put to a nurse in the last stage of consumption as to be fed on such milk. So great has this evil become that in some cities, where cows are kept for life on slop without access to the ground, the sale of their milk has been prohibited by law. But how great must have been the evil, how many thousand helpless infants must have been sent to an untimely grave, before the attention of legislators was called to the subject! and the worst of all is, the helpless infant, who has neither power nor knowledge to choose, is the sufferer.—A handful of bond meat, put into the food of each cow, two or three times a week, would partially remedy the evil.—*Western Agriculturist.*

WALKING LEAVES OF AUSTRALIA.

Almost everybody has heard of the wonderful walking leaves of Australia. For a long time after the discovery of that island many people really believed that the leaves of a certain tree which flourishes there could walk about the ground. The story arose in this way. Some English sailors landed upon the coast one day, and after roaming until they were tired, they sat down under a tree to rest themselves. A puff of wind came along and blew off a shower of leaves, which after turning over and over in the air as leaves generally do, rested upon the ground. As it was mid-summer, and everything appeared quite green, the circumstance puzzled the sailors considerably. But their surprise was much greater, as you may well suppose, when, after a short time, they saw the leaves crawling along the ground toward the trunk of the tree. They ran at once for their vessel, without stopping to examine into the matter at all, and set sail from the land where everything seemed to be bewitched. One of the men said that he "expected every moment to see the trees set to and dance a jig." Subsequent explorations of Austria have taught us that these walking leaves are insects. They live upon the trees. Their bodies are very thin and flat, their wings forming large, leaf-like organs. When they are disturbed their legs are folded away under their bodies, leaving the shape exactly like a leaf, with its stem and all complete. They are of a bright green color in the summer, but they gradually change in the fall, with the leaves, to the brown of a frost vegetation.—When shaken from the tree, they lie for a few minutes upon the ground as though they were dead, but presently they begin to crawl along toward the tree, which they ascend again. They rarely use their wings, although they are pretty well supplied in this respect.—*Life Illustrated.*

BEEF HAMS.

The finest beef hams are made by cutting out the entire bone of the hind quarter, then rubbing in the salt and sugar, the same as described for pork hams, turning them over and rubbing them every day for one week. After this they are hung up to drip in a cool dry place for three days. They are now taken down and rubbed all over, on a table or bench, with some fine salt, black pepper, and cloves, all ground together. About one ounce each of salt and pepper and half an ounce of cloves are sufficient for thirty pounds of meet, but the exact quantity cannot be given. No person can go wrong if he rubs every part of the whole surface of the ham with some of this salt and pepper composition. The ham is now fit to be rolled. This is accomplished, by rolling it into a cylindrical form, swilling it round from the narrow to the thickest end, and hanging it up to dry about ten days before it is used. It is cut in round slices for frying by commencing at the butt end. A stout cord is used to swell, or tie such hams, and it must be looped or turned under on both sides along the coils of the cord, so as to have every coil firmly bound and held in place when the ham is being cut in slices for daily use.—Hams made in this manner are the finest in the world—a luxury. Smoked beef is to be found in abundance in our markets, but it is a poor eatable of the meat kind in comparison with beef prepared as above described. We hope some of our farmers will make some such beef hams this fall for family use. They will not keep in summer weather so well as smoked beef—so it is said—but of this we are not certain.

MONGREL GEESE.

The offspring resulting from a union of the wild goose (*Anser Canadensis*) and any variety of the domestic goose, is incapable of propagation. It is commonly called, in this vicinity, "the mongrel goose." The flesh of this bird is highly prized by epicures, and usually sells at a higher price in Boston market than that of any other poultry. The day before Thanksgiving, when turkeys were selling at eighteen to twenty cents per pound, and Bremen and other large geese at a Yankee shilling (one sixth of a dollar) per pound, we asked the price of mongrel geese, and were told that they were selling at *three dollars apiece.* Their weight was probably about ten pounds dressed. This was an unusually high price but they frequently bring two dollars apiece.

These mongrel geese are very easily reared. They grow very rapidly and require nothing but grass till a short time before they are killed.—In fact they are sometimes killed in good condition, directly from the pasture. A wild gander and tame goose, or a wild goose and tame gander may be mated together, and they are sure to bring up their annual brood, perhaps for half a century.

The wild gander will seldom mate with more than one goose; he is no Mormon, and when left to his natural instincts, seems to abhor polygamy, though instances have been known in which these principles were overcome by domestication. But any tame gander will mate with several geese, whether with the wild species or any tame breed. The wild goose does not breed till she is three years old, but after that age is more certain to rear young every year than the common goose. The broods range from four to seven goslings, and all that are hatched are pretty sure to grow up, as they are hardy and not liable to accidents.

A friend who has had considerable experience in breeding geese, recommends coupling the wild gander with the Chinese goose, on account of the prolific habit of the latter. She will frequently rear two and sometimes three broods in a season. She will lay at the first clutch twice as many eggs as the common goose, and those which she can not cover herself may be hatched by ducks or barn yard fowls. The wild gander more readily mates with the Chinese goose on account of the similarity of color. There have been instances of the wild gander mating with the Bremen goose, but it is not always easy to make him "conquer his prejudices" against the white color of this breed. The cross can be more readily obtained by the Bremen gander and wild goose—the former manifesting no objection to the dusky hue of his wild companion, while the latter if kept out of sight and hearing of her own kindred, soon becomes reconciled to her white protector.—*Boston Cultivator.*

FARMERS, WHAT IS YOUR INTEREST?

Every man, to be successful in life, must have a due regard to his interest. He must understand his business, he must keep himself well informed of all events affecting his interest, and he must keep pace with the improvements and intelligence of the day.

That merchants, mechanics, artizans, professional men, &c., as classes, act upon these principles, will be admitted, but who will accuse Farmers, as a class, of doing any such thing, in a proper manner. To be sure, they look after their own interests, in a fashion peculiarly their own.

The great difference between all other industrial classes and Farmers is, that the latter, owing to their quiet rural life, their simplicity of manners, and limited education, are fearful of every proposed improvement of their condition, and regard everything that tends to destroy old established customs and modes as innovations. On the other hand, the industrial classes take advantage of every thing proposed to benefit them, and hence there is no mechanical employment that has arrived to a higher degree of perfection than the art of farming.

What then, is the interest of the Farmer, to assume a position in society commensurate with his importance? We answer, it is the paramount interest of the farmer to be educated to his pursuit. He must or ought to know the best modes of cultivation and the kinds of crops suited to his soil; he ought to know how to feed his land with manure, so that it in return may feed him by its increase; he ought to know how to make the most money out of the least labor, and consequently he must be informed as to what crops are the most profitable. If he keeps stock he ought to know that it costs as much to keep common and indifferent cattle and horses as it does to keep the best. If he is a wool grower, he ought to know the best breeds of sheep to keep. He ought to know, too, how to keep his stock properly. He ought to know and use the best implements suited to his business. He ought to know a great many other things that he does not know if he would be successful. Why is it that farming land will not realize more than 3 per cent, per annum, and we venture to say not over 2 per cent per annum? Why is it that money invested in any other property but farms is expected to yield 6 and 10 per cent? There is only one answer to be given, and that is, that farmers do not realize as much for their labor as do those engaged in any other pursuit. And lest they attribute the fault to some other reason, we hasten to say that the fault is their own. Plodding on from year to year, plowing their grounds, sowing their seed, and gathering their harvests, they have neglected to inform themselves of such matters as relates to their occupation and have looked with distrust upon those who contend that education is as essential to the farmer as to the artizan. We mean, an agricltural education, so that when he pursues a certain plan or practice, he may know the reason why he does this. The ignorant may sneer at Book Farmers; but if ever Agriculture assumes its proper position among men—the position that it occupied ages ago, as the most honorable calling that men could engage in—it must be by the influence of these same Book Farmers.

The Farmer to be successful, wants the practical experience of his neighbors. The information received by one farmer from another is just as good as though he informed himself by actual experiment. Would it not be advantageous, then, for every farmer to avail himself of all the experience of his neighbors, and in return furnish his experience. Would not all be benefited? But how is the experience of farmers to be gathered together? It will not do for each farmer to travel round the country to ascertain by personal inquiry what he wants to know. This would involve a vast amount of time, and considerable expense. Do our annual fairs and agricultural societies furnish the information? They do not. There is one way, and only one way, to obtain this information, and that is, by establishing and encouraging agricultural journals. It is the interest of every farmer to take an agriculturral newspaper and he ought to take it in preference to all others. The merchant, the mechanic, the manufacturer, makes it a duty to take the newspaper or Periodical bearing upon his interests, and makes it his first duty too. So ought the farmer. After supplying himself with the paper devoted to his interests, his taste or inclination should direct him to have such other papers as will be most advantageous to himself and his family.

It is the interest of the farmer to write for agricultural papers. If he expects to obtain information from his neighbors, he must show the example by giving to the public what he knows. If he cannot write as grammatically as the teacher, or as logically as the preacher, let him write what he thinks, in plain words that express his meaning, and his article will be as acceptible as the labored effusion of the literary man.

Lastly, it is the interest of farmers to educate their children, so that they may enter upon the duties of life better prepared than their parents were before them—so that they may take their proper position as the representatives of a pursuit which contributes more to human happiness than any other calling in this wide universe.—*Western Agriculturist.*

CORN IN THE EAR.

A very intelligent Irishman tells the following story of his first experience in America:

"I came to this country several years ago, and as soon as I arrived, hired out to a gentleman who farmed a few acres. He showed me over the premises, the stable, cow, and where the corn, hay, oats, &c., were kept, and then sent me to get my supper. After supper he said to me:

'James, you may feed the cow, and give her corn *in the ear.* I went out and walked about, thinking what could he mean? Had I understood him? I scratched my head, then resolved I would inquire again; so I went into the library where my master was writing very busily, and he answered without looking up, 'I thought I told you to give the cow some corn *in the ear.*'

I went out more puzzled than ever. What

sort of an animal must this Yankee cow be? I examined her mouth and ears. The teeth were good, and the ears were like those of kine in the old country. Dripping with sweat, I entered my master's presence once more.

'Please sir, you bid me give the cow some corn *in the ear*,—but did'nt you mean in the *mouth*?' He looked at me for a moment, and then burst into such a convulsion of laughter, I made for the stable as fast as my feet could take me, thinking I was in the service of a crazy man."

UNSEASONABLE FUEL.

A few calculations relative to the comparative value of green and seasoned wood for fuel, may serve to remind those interested of the importance of attention to the subject.

Everybody knows that green wood is poor stuff to kindle a fire, though some contend that it will keep up as well as seasoned, if applied constantly, not suffering the heat to go down.—That is, if you have a good fire to season it in, you can burn green wood as well as dry. But to the calcultations:

A green stick of wood, weighing 100 lbs., when seasoned weighs only 66 lbs., or such is about the average of wood commonly used for fuel. In a seasoned stick you have all the wood —all that will support combustion—you have only got rid of 34 lbs. of water.

Now, water will not burn, and if present in fuel, it has to be converted into steam, at the expense of that fuel, and it will take five times as much heat to make steam of water, as it will simply to bring it to a boiling point. Here is seen at once, the poor economy of burning green wood.

We have shown that about two-thirds of the weight of green wood is water: now how many barrels of water is there in a cord of wood?—There are 128 cubic feet in a cord, which allowing two-fifths for vacant space between the sticks, leaves 77 feet of solid wood, one-third of which is water—equal to over six barrels of water in every cord of green wood. The heat required to evaporate this water, would bring 30 barrels to the boiling point. And this is not the only expense. If the wood is cut properly, piled and seasoned in the woods, the cost of drawing it would be nearly one-thired less. Any way you can look at it, the economy of burning green wood is more than questionable.

Every farmer should look at, and determine to keep a stock of wood on hands, sufficient to last one year, at least. And he may take another look at the difference between wood seasoned just enough, and under cover, and that which has lain out doors until all the sap-wood has become rotten, and one-half its value been lost by exposure to the weather.—*Ag. Ex.*

GROWTH OF PLANTS.—The seeds of plants, by exposure to the joint action of heat, light, air, and moisture, absorb water and oxygen; a kind of fermentation commences; carbonic acid is thrown off; and the starch contained in the seed is converted into sugar. The embryo plant then bgins to evolve itself; the roots seeking the earth, and the top stretching upward "in search of more light."

From Life Illustrated.

WILL FARMING PAY.

"He that by the plow would thrive,
Himself must either hold or drive."—FRANKLIN.

All things are conditional. Experience affirms that farming has been the basis of the world's progress since the creation of man. It has paid for all the real wealth of all countries from time immemorial, and can be made to pay through all coming time, while the laws of nature remain the same. Practical men affirm that one third will pay the cost of production, hence the safety of capital invested in judicious farming. Like all other business, it must be conducted wisely, according to varying circumstances, to produce the best results; but as things are, it pays better on the average, in the long run, than any other business on the same amount of capital. But its pecuniary success is not all; it pays in *health* far beyond any other business known. It combines in its duties the natural life of man, giving him his needed exercise, physical, mental and moral, in a truly natural way, and consequently the most healthful.

"Health is the vital principle of bliss,
And exercise of health. In proof of this,
Behold the wretch who slugs his life away,
Soon swallowed in disease's sad abyss."

It will pay in *independence*, the true condition of real manhood. To feel free and independent of any pecuniary obligation to our fellow-man brings a degree of happiness seldom found in mercantile or commercial life. The owner of a good farm can think and speak his own thoughts without iujuring the price or sale of his corn or losing a customer. When good wheat or beef is brought to market, the article demands for itself the highest praise and price, irrespective of the party or opinions of the producer. Not so in stores and shops. We must be squared by popular forms of faith, creeds, and politics, or shunned by the multitude, who fear to tread upon advanced ground.

Independence is natural to man; he yearns for it, and will not stop short of it until broken down in despair. The instincts of his nature break forth under oppression in the significant inquiry of the immortal Burns:

"If I'm designed yon lordlings slave—
By nature's law designed,
Why was an independent wish
E'er planted in my mind!"

It will pay in *happiness*, the only object and end of a rational life. Enjoyment makes existence endurable. Circumstances contribute to this condition. Farming offers the most for the heart and mind of man. Variety is the spice of life. No occupation calls for more varied labor than scientific farming. All the natural sciences are of use to the intelligent farmer, such as botany geology, chemistry, &c. His success depends upon the judicious application of knowledge derived from nature's laws.

The farm is the college of nature, whose philosophical aparatus and library are free. Every sense can be rationally gratified according to its normal desires. Inexhaustible sources of happiness are within the farmer's reach. The earth, air and water speak in a significant language to the free inquirer after truth. There are "tongues in trees, sermons in stones, books in

the running brooks, and good in every thing." "The lillies of the field toil not, neither do they spin, and yet Solomon in all his glory was not arrayed like one of these."

"Oh! how canst thou renounce the boundless store
Of charms which nature to her votary yields!
The warbling woodlands, the resounding shore,
The pomp of groves and garniture of fields."

No home can equal the farmer's in all the combined facilities for domestic joys. A man of taste, order and arrangement can surround himself on a farm with comforts more satisfying to his whole nature than in any other situation in life. A garden of ample dimensions, filled with fruits, vegetables, and flowers of every hue and variety; a large door-yard planted with ornamental shrubs and trees, overspread with green, are enough to charm the eye and delight the heart. Then that cool, waterproof cellar under an ice-house, preserving through summer's heat every perishable luxury the palate can desire. And that large winter cellar well stored with winter fruits and vegetables, bidding gaunt famine depart in peace. These well filled barns and stables are more reliable for discount and deposit than Wall Street banks or exchange offices. The farm is the only proper place to rear a family. Children brought into life without their knowledge or consent, should be born under the most favorable circumstances, and be well brought up physiologically, else their existence may be a curse rather than a blessing to them and the world—a consideration worthy of the attention of every lover of his race. J. F.

SELECTION OF A FARM.

In the selection of land for a farm, there are thoughts and things to be taken into consideration that a volume would scarcely serve to discuss, yet some of them may be profitably hinted at within the limits which here circumscribe us. What is a *farm?* should first be asked; for in the consideration of any subject it is time well applied which is spent in getting a clear idea of the *word* which names it. A farm, for us, means a portion of land cultivated and manged by the *owner*, who lives upon it; and hence it takes in the thought of *home*, so that *homestead* is almost a synonymous term. Hence among things to be considered in the choice of a farm, we shall say:

1. The farm should be pleasantly and conveniently situated *as a home.* The health, comfort and happiness of those who are to occupy it, are of prime importance—so every social and physical influence which bear upon them, should have due weight in determining a choice. However fertile a farm may be, if the locality is an unhealthy one, it cannot make a pleasant home. If fertile and healthy, but surrounded by a moral miasma—or with few social privileges and advantages—it cannot be a pleasant home.

2. The farm should be in agreement with the means and circumstances of the owner. A farmer needs capital as well as land, in order to operate profitably. The great error of American husbandry is that farms are, almost universally, too large for the labor and capital at the command of those who carry them on.—Hence arises a train of evils which we have often sought to bring before our readers.

3. The farm should be suited to the products proposed—and those should conform with the demands of the market, and the taste and experience of the owner. Some farms are best calculated for grain growing, others for the dairy, others still for stock and wool growing. In many localities these may be profitably combined, and land secured which shall be appropriated to such a course of husbandry. The recent great increase in the facilities of transportation, influences a large extent of country, and many places heretofore of small value on account of distance from market, have now become desirable for farming purposes. Still, it is worthy to be thought of, whether it will cost ten cents or one hundred to bring a product before the consumer, and the value of a farm will depend materially upon the expense of inter-communication. The domestic demand is also of importance, and always exists, varying with locality. The taste and experience of the farmer should of course influence his choice—he will be most successful who is most favorably and agreeably situated, and who best knows how to employ the advantages at his command.

Other influences exist and should be considered—these we have rather hinted at than discussed,—we prefer to leave the latter to our readers. If we can only *start* topics in such a way as to call out and suggest farther *thinking* by those who read, our object will be accomplished.—*Rural New Yorker.*

From the Country Gentleman.

BOARDS FOR DRAINING.

Messrs. Editors—Much has been said for a few years past, on the subject of thorough drainage, which is one of the most essential points of successful farming. I give you my method of drainage, which I think is equally as good in all respects as grain tile. I take two pieces of one inch board, one of one by four and another of one by five, nail the two together, forming a V, of any length—8, 12, 14 or 16 feet, and laying them in the drain. This is equal to the horse shoe tile in calibre, and one thousand feet board measure, will lay 76 rods of drain at about one third of the cost of the horse shoe tile, including the first cost, charges for freight, &c. Every farmer almost in the State, has the means of procuring the boards at a trifling cost, as hemlock, pine, chesnut or spruce, will saw into this kind of lumber. In case the land be of a quick sand, or soft, mucky bottom, requiring the sole tile, I lay one board on the bottom of the drain, one by nine inches, which I think is much preferable, as it is laid in one quarter of the time, and is just as durable as the tile.

I have heard a great many complain that draining is too expensive, the tile costing too much; but in my way of thinking, every farmer in the State, that wishes to drain his land, has the means within himself, and those that have not can procure the lumber at a low price, say from 8 to 10 dollars per one thousand feet. I give you my views on this matter, thinking that some of your patrons may be benefitted by this mode of drainage, material and mode of laying drains. William Winspear.

MILK FROM SPAYED COWS.

BY J. U. HECKERMAN, TIFFIN CITY, OHIO.

Except bread alone, there is perhaps no article that enters so largely into the nutrition of man as that of milk. As food and drink, it is extensively consumed by the adult portion of our race, it constitutes the exclusive nourishment of nine-tenths of all children under twelve months, and forms the chief diet of the remaining one-tenth.

The chemical and medical properties of milk have long been made the subject of scientific investigation, and long has the writer in vain looked for something from the pen of a senior observer on the point of which he now wishes to direct attention.

It has ever been a desideratum in the rearing of children who are denied the breast of a mother or nurse, to procure milk from an animal in which it approaches nearest to that of the human female, and which shall uniformly have the same constituent properties.

In looking over the tables which are given of the constituents of milk, we seldom meet two authors who agree in their observations; indeed, so great are the discrepancies, that they only serve to confound us in confusion. This circumstance can be accounted for by the different animals experimented upon, the season of the year, the character of the food afforded, and the period of pregnancy or non-pregnancy of the animals at the time of the experiments.

Taking the cow, we find that exercise and food, among other things, greatly affect the quality of the milk. The milk of cows kept in the byre contains a larger amount of butyrine than is afforded by animals running at large, while the milk of the latter abounds more in caseine. So great, indeed is the influence of food upon the secretions, that, when cows are fed upon bitter or strong-smelling grass or herbs, the taste and smell of such grass is imparted to the milk.

Milk, we have already said, forms the chief diet of that unfortunate class of infants, who are reared by dry nursing, and it is estimated that three fourths of these die; indeed it has been said that, in London, this mortality amounts to seven eighths of the whole number. Be this as it may, we do know the mortality to be very great, sufficiently so, at least, to demand the earnest attention of every physician.

Standard authors direct children who are thus reared, or who have been early weaned from the breast, to be supported upon milk largely diluted by water and sugar, without, however, any reference to the condition of the animal from which the milk is derived. This we hold to be a serious defect, to be especially so considered, when the remedy is at hand, yet seldom or never used, for lack of information upon the subject.

Lasigne found that the milk of cows far advanced in pregnancy, contains neither caseine, sugar of milk or lactic acid, but abounded in albumen and uncombined soda; while from the same animal, shortly after parturition, the three first named substances were found, and albumen was entirely absent.

It is now the received opinion, that upon the accession of pregnancy, a woman should no longer furnish nourishment to a former child, and that such continuance proves detrimental to the health of both parties. These views are confirmed by experience, and by the habits of inferior animals.

If the milk of a pregnant woman afford improper nutriment to a child, surely the same fluid from a cow, in like condition, cannot be proper. Remembering then, that cows, on an average, are pregnant three fourths of the whole year, the inference must be that the milk ordinarily derived from these animals is not of a proper character to constitute the diet of infants.

With a view to remedy this universally existing evil, I would suggest to the profession the propriety of having milch cows spayed, in order to procure milk of a uniform consistency. The act of spaying is performed with facility, and is unattended with danger, the only precaution necessary being that no food be given for twelve to fifteen hours, and the milk drawn immediately before the operation; the animal becomes kindly disposed, is easily kept, will yield better, and a larger amount of milk in a given time, and is with great ease brought into a marketable condition.

The steps of the operation upon the cow are the same as upon the calf or the sow, except that it is important to place her upon the right side, unless the operator be left handed. The best time for operating is about four weeks after parturition, as the future amount of milk will depend upon the quantity given at the time of the operation. For some weeks after, the secretion of milk will be small, but will gradually increase until the amount previously given is furnished, which we have known continued without interruption (of course less in winter than in summer) for the space of ten years.

It is not expected that every father can be circumstanced to keep a cow for the accommodation of his child; but if physicians were to direct the attention of those who keep cows to the above facts, it would be found advantageous to keep the spayed instead of the ordinary animal, and the proprietors of milk furnishing dairies would readily furnish the supply, if the demand was made. The above facts briefly stated we think of sufficient importance to claim the attention of every medical practitioner, as furnishing him the means of preventing much suffering on the part of advanced infancy and saving the domestic idol in the circle of many grateful friends.—*Western Lancet.*

CORN BREAD—A NEW RECEIPT.—Every body who has been at the mansion House, at Buffalo, N. Y., has learned the luxury of the corn bread there provided. The clerk is often taxed to write directions for home manufacture, and I thus procured a receipt for domestic use, which I copy for you, so that those who wish may try a piece of bread from the Mansion. It is as follows: one quart of sour milk, one table spoonful of saleratus, four ounces of butter, three table spoonfuls of flour, three eggs, and cornmeal sufficient to make a stiff batter.—*Ex.*

Stock Raising Department.

PREPARING FOOD FOR FARM STOCK.

The perfect adaptation of our soil and climate to the growth of Indian corn, and the small cost at which it can be produced, has led to slovenly and wasteful habits of feeding most kinds of farm stock.

There are many causes operating to increase the market value of this among other grains, consequently farmers should adopt more economical methods of feeding.

Necessity has compelled the European farmers to make numerous experiments with the view to ascertain the most profitable system of feeding farm animals. In examining the result of these experiments, we find them in favor of cut hay or straw, either steeped or steamed, and the grain ground into fine meal, and thoroughly incorporated with the hay or straw; and in feeding swine, the grain is almost always cooked.

In some instances, where fuel is dear, it has been found that the cost of cooking has somewhat exceeded the profits derived from the process; though we believe, in all cases, stock, particularly hogs, when fed on boiled or steamed food, the gain has always been much greater in the same time, and on the same quantity of food, than when fed on uncooked food. This, then, establishes the fact, that when food is thus prepared, the animal body is more readily built up, with the least waste of the food consumed.

In 1833, the Rev. Henry Coleman, of Massachusetts, made a series of experiments in fattening swine on cooked meal. Among a great number of interesting results, he found that one measure of meal, boiled until it would absorb as much water as to increase it equal in bulk and consistency to that made of two measures of meal less boiled, gave a gain of flesh nearly equal to the two measures of meal.

Careful experiments have been made by Prof. A. Gyde, to determine the advantages of ground oats fed to horses over those fed unground; although oats are more easily masticated than other kinds of grain.

Two horses, in good health, in daily work, and as nearly as possible equal in size and age, were selected by Prof. G. for the experiment. Each horse was allowed a given quantity of hay and oats, and the only difference in the feeding consisted in one horse having the oats ground, and to the other the oats were given unground. On the fourth day after this mode of feeding was adopted, the solid exerements of each horse were examined; the dung of the horse fed on ground oats was found to be deprived of all the nutritious matter contained in the food; while the dung from the horse fed on the unground oats was found to contain a considerable percentage of nutritious matter, which had not been acted on by the stomach; arising from the inability of the horse to perform perfect mastication. Their loss must vary more or less, according to the age of the horse, the rapidity of feeding, &c.

In the Southern and Western States, Indian corn constitutes almost the entire grain fed to horses, cattle and hogs. This grain is harder and much more difficult of thorough mastication than oats, and hence the waste of feeding it unground is very great.

Many of our farmers are beginning to understand in some measure the advantages of feeding their corn in a ground state. This has led to the manufacture of a great variety of corn and cob crushers. These crushers are generally made of cast iron, and while they last but a short time, they but very imperfectly prepare the grain for feeding; indeed, they only leave the corn and cob in a suitable form to be run through an ordinary pair of mill-stones to complete the grinding.

In using this class of mills, the advantages of grinding, as we have intimated, are but partially obtained, while the meal of the corn and cob, with its sharp and flinty corners, fed as it usually is, uncooked and dry, often acts most injuriously upon the mucus membrane of the stomach and intestines of the animal, frequently producing serious derangement, and causing the animal to void much of the food entirely undigested. These mills have come into general favor because they are cheap, and can be put into operation without incurring the cost of a horse power machine to propel them.

In order to secure the full benefit of all the nutritive qualities of the grain, it should be ground fine; and this cannot be done in any of the cast iron mills we have seen.

We do not know of but one mill now manufactured and offered to the public, that is perfectly adapted to grinding corn and cob sufficiently fine at one operation for economical feeding. This mill is manufactured by Isaac Straub, of Cincinnati. It is adapted to grinding corn and cob, or corn alone for family use. The stones are of the best French burr, and the mills, we believe, give universal satisfaction.

It is a question in the minds of many whether the cob of Indian corn affords any nutriment or not. Numerous analyses of corn and of cob are

given by Mr. Salisbury and Prof. Emmons, of New York.

From the result of one of these examinations, it appears that the organic part of the cob contains,

Sugar - - -	2,49
Woody fiber - - -	90,80
Nitrogenous substances -	2,19
Gummy substances - -	4,52
	100,00

Independent of the nutriment contained in the cob of Indian corn, we believe that where the whole is properly ground together the cob performs a very important part in the economy of fattening swine; as corn, when fed alone, is too concentrated, and fails to afford sufficient distension to the organs to insure perfect and healthy digestion. But in point of economy, the question is, at the present price of corn and pork, will the advantages derived from grinding and cooking the meal warrant the labor and expense? We should be glad to see a series of experiments instituted upon unground corn, upon corn meal, and corn and cob meal, cooked and uncooked, with the cost and advantages of the whole accurately ascertained. This would be a proper subject for the investigation of some of our agricultural societies.

It is a well known fact, that the stomachs of the horse and the hog differ widely from the complicated digestive organs of the ruminating tribe of animals, such as the ox and the sheep; they being little else than a mere membraneous bag. The process of mastication, particularly of grain, is also much more thorough with the horse and the hog than with ruminants, and hence the greater importance of a proper preparation of the food for the latter class of animals.

Cattle but imperfectly masticate their food before it is swallowed; and when the first stomach is filled, the animal lies down to rest, and when the mass has been slightly moistened by a secreted fluid, the mysterious process of mastication, or, as generally expressed, chewing the cud, commences. The food, in a semi-pulpy form, and in small detached portions, is returned to the mouth, when perfect mastication takes place; after which the food passes into the second stomach, denominated by comparative anatomists *omasum*; from this it passes into the third stomach, the *abomasum*; in these two last it undergoes very important changes, and passes into the fourth or really true stomach. It is in this last portion of the curious and wonderfully complicated apparatus that the function of digestion is ultimately and perfectly performed; and the last process of extracting the nutriment from the food is exactly similar to that which occurs in those animals referred to as having simple membraneous stomach. Now the milk, when received by the calf from its mother, passes directly to the fourth or last stomach. So, also, does corn, or the meal of grain, when fed to adult animals of this class, unless with an admixture of coarser food, and making no lodgment in the first stomach, it fails to pass through the ruminating process, and consequently a large proportion of it passes from the animal undigested, and results in total loss to the farmer, unless perhaps hogs or fowls pick it up.

In order that cattle may have the full benefit of all the nutricious properties of the grain they consume, *it should first be ground into fine meal, and only fed to them when incorporated with hay or straw, which should first be cut and then soaked or thoroughly moistened before mixing it with the meal.* When swallowed in this form the meal is raised again with the coarser portions of the food, and is more thoroughly masticated and rendered in a fit condition to be acted on by the solvents of the stomach, and converted into *chyme* and *chyle*,* and finally prepared for perfect assimilation.

These are important subjects, and should now command the attention of every farmer and stock grower in the country.

An Experiment with Corn and Cob Meal.

Since writing the foregoing, we find in the *Western Agriculturist* the following; which, among several other similar articles to which we could refer, fully corroborate what we have said upon the injurious effects of half ground meal or crushed corn and cob. If the corn and cob had been ground, as it should have been, between a pair of mill stones, we are confident no such injurious effects would have followed. The writer says:

"Two years ago, I attempted to fatten a yonng beef for my own use with meal made by grinding together corn and cob. It was a failure. I am satisfied that had the cob been excluded, I should have succeeded much better with the meal alone. The ground cob is wholly indigestible, in my opinion; and irritating the stomach and intestines, it produced continual looseness, carrying off a great portion of the meal with the cob undigested. The droppings were at least one-fifth meal, showing unhealthy action somewhere.

*Chyme is the name given by physiologists to the substance of the food after it has passed through the first series of changes in the stomach. The chyme in its passage from the stomach is acted upon by the bile from the liver, and is separated into two distinct substances: the one into the fluid called chyle, which goes to build up and sustain the animal system; and the other is the indigestible remains of the food, and is expelled from the body.

FARM STOCK—IMPORTANCE OF PROTECTION IN WINTER.

There is no portion of our wide extended country, so well adapted to the raising of stock, as the great valley of the West.

In the early settlement of the West, beef was comparatively of but little value, and hence cattle were much neglected. They were usually turned into the woods, or to the straw stacks to take care of themselves in winter; and during storms of rain and snow they would seek for shelter under the sides of the fences or straw stacks, and before spring they would lose half the weight of flesh they had gained during the previous summer, if many of them did not die before the close of March.

There are still among us too many farmers who, from long established habit, continue to neglect their stock in winter. Interest, if not humanity, should speedily bring about a reformation in this respect.

The numerous railroad communications with the West, have now opened to us the remotest markets in the Union for our beef, and the result has been, that for the last two years, the supply has hardly been equal to the demand, and consequently prices have much advanced. From the present prospects this deficiency will contiue to increase.

Now we believe, that in many sections, under a proper system of management, the raising of beef cattle, in connection with other branches of farm husbandry is the most profitable course a farmer can pursue. It requires less labor than any other branch, and the crops consumed may be transported to market in the form of beef at less cost than any other.

A young, growing animal requires more food than one that is full grown, because it has to consume sufficent to supply both the natural daily waste, and add at the same time to its daily growth; while the full grown animal has only to supply the natural waste.

In keeping an animal through the winter, as a matter of economy it should be kept in a constantly growing condition; otherwise all the food it consumes is lost to the farmer; for it requires a given amount of food during winter to maintain animal life, with which it will neither gain or lose in weight; a small additional amount of food with proper care and protection will keep it continually thriving, and in the spring it enters the pasture in a condition to take flesh rapidly.

In winter an animal requires more food to keep it in a growing state than in summer, and the quantity of food must be in proportion to the degree of cold to which it is exposed; hence the importance of warm shelters for the protection of all domestic animals, particularly in cold or stormy weather; those in the middle regions of the West may be of the cheapest and most simple construction.

Every animal body maintains a heat above the surrounding atmosphere, which is denominated animal heat. In those animals domesticated by man, the heat is found to be on an average about 100 degrees of Fahrenheit's thermometer, and this heat continues much the same whether beneath the sun, or in a more temperate climate, or exposed to the frigid regions of the north.

The animal heat originates in the body: it is caused by the chemical combination of the elements contained in the food. The heat which is thus produced, is occasioned by exactly the same chemical action, as that which causes the combustion of wood in a stove, or oil in a lamp, and the products are exactly the same; the carbon and hydrogen of the food combine with the oxygen that is supplied by the atmosphere, and heat is generated in the body in proportion to the quantity which is consumed. In the stove or lamp the same changes take place,—the fuel being composed of similar elements entering into the food.

There are few subjects more deserving the attention of practical agriculturists and stock-growers, than a knowledge of animal physiology and the laws of nutrition and assimilation, and the proper connection which exists and should be duly preserved between the members of the animal and vegetable kingdom.

In considering the subject philosophically, we must first examine what are the substances which enter into the office of nutrition, and ascertain by what means nourishment is afforded to the animal.

Within the last century many important discoveries have been made in the science of agricultural chemistry, particularly by a few distinguished scholars of Europe, to whom the philosophical and agricultural world are deeply indebted for the valuable information which has been imparted upon these subjects.

From these discoveries, we learn that the food of farm animals is composed of precisely the same constituents, as those which make up the flesh and blood of those animals, and in nearly the same proportions.

The food of all classes of animals consists of two kinds of distinct species of matter, viz:—The principal constituents of one of these is *azote* or *nitrogen*, which goes to make up the

flesh, that is, the muscle of the animal. The other portion contains no *nitrogen*, but consists of *gum*, *starch*, *sugar* and woody fibre.

Every one of these different substances answers two quite distinct, but very important purposes in the economy of the animal body.

The first or the *nitrogenous* constituents supply the waste which has occurred in the fluids and tissues of the body, and are very justly termed the elements of nutrition.

The last, being the chief elements of respiration, are the *nonnitrogenous* portion, and serves as fuel for combustion in the lungs, and is the source of supply of the animal heat, and at the same time contributes to the formation of fat.

It is admitted that the combustion, digestion and decomposition of starch and other *nonnitrogenized* elements which are contained in the food of animals are the only source of the supply of animal heat; and in order then, to maintain the animal in a growing state through the winter, the supply of food must be increased in proportion to the degree of cold to which it is exposed. But when the animal is unduly exposed to cold, and any portion of the necessary quantity of food is withheld, the fat of the body is consumed,—its carbon being converted into carbonic acid, and its hydrogen into water, and hence results emaciation; and if privation and exposure be long continued, starvation and death ensues.

It is well known that one species of food possesses a greater quantity of nourishment than another; and that the Esquimaux and Greenlanders of the frozen regions of the north require a large quantity of train-oil with their daily food, and that their stomachs will digest the rancid flesh and blubber from the whales and seals, which would prove extremely injurious, if it did not cause death to the inhabitants of more congenial and warmer climates.

Now in view of these facts, which are alike sustained by experience and philosophy, and in view of the present and prospective price of farm products, and of the market value of beef, we contend that the interest of the farmer demands an improvement in the management of his animals.

If it requires five years or more, under the present system of raising stock, to bring an animal into a fit condition for the shambles, and if the same animal, with the addition of a small percent of suitable food, properly prepared and economically fed, and provided with some cheap, though warm shelter in winter, can be brought to the same degree of maturity in three or four years, so as to be sold off and give place upon the farm for others, certainly the improvement should be adopted.

RAISING AND FEEDING HOGS.

As the raising, feeding and fattening of hogs is a matter of considerable pecuniary importance, a few remarks upon the subject may not be altogether unprofitable. Concerning this as well as every other branch of his business, the farmer should have some settled views, founded upon his own or the experience of others, causing him to adopt such a course as will enable him to receive the greatest amount of profit in return for the smallest expenditure. To do this in every instance requires labor of the head as well as of the hands.

In raising hogs, great care should be taken with them at the commencement. Pigs intended to be fatted the first fall, should come early, say in March, or the first part of April; those intended for store hogs, or "keeping over," will do as well to come in May. The sow should not be fed too highly previous to pigging, or for some time after. If she is allowed to take on too much fat before pigging, the pig will be puny and small; if, immediately after, she is fed too freely with hearty feed, it is apt to engender a feverishness which is highly injurious both to herself and pigs. Two or three quarts of slop or milk at a time is all she will bear at first which may be gradually increased in quantity and quality for about ten days, when from that time forward she may receive all she will eat. A few days before her time is up, her old nest should be removed and she should be supplied with fresh straw for a new one. Too much straw is not best, as the young pigs are apt to be smothered by being covered up and lain upon by the mother. The pigs should be kept as clean as possible, as this will greatly promote their growth. The dirt and filth of the hog pen should be thoroughly removed, for it is very injurious. By allowing the pigs to wallow in it, they become almost encased in a sort of scurf which very materially impedes their growth.—A few washings in soap suds is good to remove the scurf. Pigs should not be weaned before they are eight or ten weeks old, if it can possibly be avoided, and then it would be better to wean only a part, leaving two or three of the smallest unweaned, by which means the difference in their size may be greatly lessened. During the summer, pigs should not be fed on too heavy feed, for their rapid growth, and not increase in fat, is the object. Milk, slightly thickened with a mixture of oat and corn meal, is sufficiently heavy, and as good as anything they can have. Of this they may receive all they will eat. A little hard corn occasionally, is good to prevent the scours. They should be permitted to get at the ground if possible, but should have free access to a tight warm pen; to shelter them from cold storms.

By following the above directions, hogs may be pushed along in growth through the summer, so as with proper fatting, to be made to dress 300 pounds in the fall. But I will close here, leaving the fatting, wintering and summering of hogs for another article at some future time.—*Ex.*

On the Feeding and Care of Colts after Weaning.

An opinion generally prevails among farmers, that from the time the foal is taken from its dam up to coming maturity, it should not be "*pushed*," as the saying is, nor fed on grain, for fear it might injure one so young and tender. This accounts for the great number of moping, or spiritless, and unthrifty colts, that are scarcely able to drag one leg after the other. Their very appearance cadaverous and pitiful looks, seem to convey to the mind of every *sensible* man that they are the victims of a wretched system of starvation, which enervates the digestive organs, impairs the secretions, and impoverishes the blood. Hence the deficiency in the development of bone and muscle. The muscles and tendons being so ill-supplied with material for growth and development become weak, and afford but little support to the bones and joints, so that the former become crooked and the latter weak, defects which no after feeding, no skill in training can counteract.—The digestive organs of these young animals are not calculated to extract nutriment from such inferior provender as some of them get; consequently the cravings of hunger compel them often to gorge themselves with the same, merely to keep the vital spark ignited. The result is that they over distend the stomach and bowels and become "*pot bellied.*" Such a miserable mode of feeding is the principal cause of the generation of intestinal worms; on the discovery of which the owner cries out worms! worms! and thinks he has discovered the cause of the colt's unthriftiness; and then commences drugging the animal for the same with vermifuge that would oftentimes kill a *well* animal; to say the least, many of the extolled drugs prove more injurious to the digestive organs than to the worms. And supposing he succeeds in physicing off the worms they appear again, and the case is as bad, and even worse, than before; because physic debilitates the animal. Whereas, the owner should remove the cause, which exists in the form of innutritive diet.

It should be known to breeders that from the time of birth up to maturity, colts require food abounding in flesh making principle, nitrogenous compounds, oats, corn, &c.; otherwise they must necessarily be deficient in size, symmetry and powers of endurance.

This truth may be illustrated by analogy.—For example, we desire to raise to perfection and full proportion, any particular vegetable production. In order to do so we must select soil or furnish the same with the elements of the organized tissues of such vegetable, or how can we expect it to become perfected. Just so with the colt; the elements of its organised tissues must assist in proper quantity and quality of food.

Colts should be regularly fed and watered; their food to consist of ground oats, wheat bran and sweet hay, in quantities sufficient to promote their growth.

Another bad system is, that of not providing proper shelter for such animals; they are often exposed to the vicissitudes of the weather, under the false notion of making them *tough* and *hardy*. I know not what the benevolence of some men consists of when they suffer a plain uncomplaining brute to endure both neglect and hunger without remorse.

Equally unwise are those men who confine their colts to close, unventillated and filthy stables, deprived of light, exercise, and pure air. Can we wonder at their wretched appearance? Colts should be groomed every day; a clean skin favors the vitalization of the blood. They should be permitted to *gambol* about as much as they choose. Exercise develops muscle, makes an animal active and spirited, and increases the capacity of the lungs and chest. By the above means and proper attention to the principles of breeding, the business of raising colts may become both creditable and profitable.—*American Veterinary Journal.*

Improvement in Animals.

No kind of food can make an ill-bred, ill-shaped beast fat in time to be profitable.—Just as some men are more inclined to grow fat than others, so are some animals; and by selecting individuals of proper shape with this tendency, certain breeds have been stereotyped into never failing type; that type in an ox or sheep is one which presents the largest extent of prime meat, and the least amount of offal; or as a South down Breeder expressed it, "a perfect sheep should be as near as possible, all legs and loins of mutton."

To make this improvement, required a certain talent, enthusiasm and years of patience.—Breeders of pure stock, like mechanical inventors, do not on an average make money. On the contrary, for the pleasures of the pursuit, and the hope of success, they expend large fortunes, while few win great prizes. But the country gains enormously in the result, for now the same space of ground will feed twice the quantity of beef and mutton that it would fifty years ago. The animals not only come to maturity in half the time, but fed, partly in yards or stalls, they spoil less ground with treading, and return to the soil highly concentrated and productive manure.

The first man who made stock breeding a fashionable pursuit, and that is a great thing in a country where fashion rules too much, was Robert Bakewell, of Dishley, in Leicestershire, the son and grandson of farmers, but if we mistake not, himself a barrister. With horned cattle he aimed at the cardinal improvements which are now so universally established and admitted in this country where the growth of meat, less than the dairy as in Holland and Switzerland, is the principal object. He tried to produce a large cylindrical body, small neck, small extremities and small bone. He said all was useless that was not beef; and sought by choosing and pairing the best specimens to make the shoulders comparatively small, and the hind quarters large, which is allowed to breed freely, and to gallop at liberty over wide pastures. Even the cattle of Australia, bred from pure specimens after running wild for a few generations, begin to lose the fine sirloins of their English ancestors, growing tough and stringy for the spit in proportion as they become active.

In sheep Mr. Bakewell declared that his object was mutton, not wool; and disregarding mere size which is a vulgar test of merit, he chose animals which had that external form of producing the most muscle and fat, and the least bone; and, by careful selection and breeding he stamped a form on the Leicester sheep which is retained to this day.

The South Downs, doubtless an indigenous breed, fed on the bare pastures of the Southern coast, produce a fine quality of meat, and a coarse short wool. It was the turnip that rendered feeding the South Down while young possible. The great improvement began with John Ellman, of Glynde, near Lews, in the year seventeen hundred and eighty. He preserved the form of the original breed, but corrected the too great height of the fore-quarters; widened the chest, made the back broader, the ribs more curved, and the trunk more symmetrical and compact. The ancestors of the present race were rarely killed until the third or fourth year. They are now sent to execution at two years, and sometimes even at fifteen months old. They have since spread far; superceding the Berkshire, Hampshire, Wiltshire, crossing and altering the Shropshire, extending into Dorshire, Norfolk, Devonshire, Herefordshire, Wales, and even towards Westmoreland and Cumberland, and have improved all the breeds of black-faced heath sheep.—*Dickens' Household Words*

THE MARKS OF A TRUE BRED SHORT HORN.

In the new Herd Book of Short Horn Cattle, lately published by L. F. Allen, are given the points by which a true-bred Short Horn is known. For the benefit of our readers who may not have access to the book, we copy the following extract:

The question, what constitutes a true-bred Shorthorn, has frequently been asked, by those who are curious to know the unmistakable characteristics by which any admixture of foreign blood may be detected, in an animal claimed as a true Shorthorn. To set out upon given premises, we will remark that a well bred Shorthorn should, in color, be either red or white, or of these colors intermixed, no other colors deeper than red being known within recorded histories of them in England. There is a race of Dutch, and other cattle, in the western countries of continental Europe, which may be called Shorthorns, (from which it has been claimed that the English Shorthorns originally sprung,) that are black and white, and red and white, spotted, parti-colored, and roan of those colors.

They possess some of the features of the English Shorthorns, in the lightness of their horns, their broad hips, capacious bodies, and large milking qualities; but they are usually large consumers, slow feeders, hard handlers, with black noses, and every way coarser animals.—It is not necessary at this stage of remark, to go into examination of the relation of our present breed of Shorthorns with these foreign breeds but to settle as far as may be settled, the prominent characteristics of what are considered true blood in our present animals.

The principal marks of a thorough bred Shorthorn may thus be enumerated:

A yellow skin, with a yellow, cream colored, or drab-nose; this drab may run to a brownish shade, called nut-colored, but not smoky or black.

The colors of the hair a lively red, (the red running down into a deep cherry, or up into a yellowish,) or a brilliant white; and these red and white colors, either separate, or in patches or spots by themselves, or intermixed in roan—either color more or less prevailing.

The horn waxy, or a cream color, with little black about it, but what black it has at the tips; it should also be small, short and slender, either crumpled, gently drooping, or slightly turned up.

A general levelness of the back from the shoulders, at the setting on the neck to the tail.

A fullness and depth of body throughout, with great breadth.

Short and fine legs; a fine tail.

A symmetrical appearance throughout; with a lively gentle, yet sprightly look of the eye.

There are other intermediate points of excellence, that may be named, to constitute a perfect Shorthorn, but these which are named are usually considered indispensable.

Glaring defects, in spite of their improved breeding, have occasionally crept out from the existence of similar defects in their ancestry, far back, tending to the belief that such defects were common to the original Shorthorns, but by careful breeding had been bred out to a great extent. One or more of such defects are occasionally seen in the produce of some of the best bred animals, but it is the exception, not the rule; and animals with either of such defects if very prominent, are not to be recommended as breeders, where the best of breeding blood is required, as they may possibly perpetuate those same defects in their descendants. For breeding grade stock, or for the objects of beef alone, a partially deficient animal may be used, when his defects are counterbalanced by other valuable points. But for the breeding of choice thoroughbreds as many good points should attach to both sire and dam as may be obtained.

It will be seen therefore, that n all cases where foreign blood has been in any degree intermixed with the true Shorthorn, the main characteristics of the Shorthorn have been sought to be perpetuated by the breeder in the descendant, and not the characteristics of the 'foreign' blood; and when such foreign blood was purposely introduced upon the Shorthorn by the breeder, it was a correct defect in the Shorthorn itself, by impairing an excellence supposed to be capable of being so impaired, without detriment to the better qualities of the Shorthorn; but we have no positive evidence that any benefit has ever been derived to the Shorthorn blood by such intermixture; therefore purity of blood should be sought by every breeder, who expects to excel in the quality and reputation of his herd.—*Western Agriculturist.*

☞ From the Patent Office the seed of the cork tree has been distributed to a number of States to test its adaptation to our climate.

Horticultural Department.

PROPAGATION OF THE PEACH.

Every farmer should have the best varieties of this invaluable fruit. No fruit tree comes into bearing quicker after planting than the peach. The methods of propagating it are very simple. They are as follows:

The seeds may be spread in autumn, on some sandy knoll, three or four inches thick,, and covered with about the same thickness of earth. When the frost leaves the ground, in spring, the stones will be found partly opened, and the germ of the seed will have made its appearance.—This, however, will not be the case with all. The stones which have not opened, should be placed on a wooden block, on the side edge, and carefully cracked with a mallet, and either planted in rows, or put in earth in a warm place, and germinated before planting.

Others prefer putting the stones (or pits) in boxes with alternate layers of sand, or light earth, and exposing them to the action of the frost. These are examined in spring at the time of planting, and those which have not germinated, are cracked in the manner above stated.—Some plant them in rows, in November, two or three inches deeep, in light or saudy soil. But this system is not much practiced now. The seeds are not generally planted until the germ has made its appearance. They are then put in rows about four feet apart, and the seed is dropped about a foot or a foot and a half apart in the row, and covered with about two inches of earth.

The peach should be budded the same season that it is planted. The usual time of budding is about the middle of September. Every farmer should consider it an indispensable part of his education to learn how to bud and graft the various kinds of fruit trees. The practice is very simple, and the dullest man can learn how to do it in one or two hours. He can then propagate whatever varieties he may choose. He will not be compelled to run to the nurseryman whenever he wants a few trees. He is his own nurseryman.

THE PEACH WORM.

As good a method as any to destroy the peach worm, where one has but a few trees, is to pour boiling water upon the roots. This will cause no injury to the tree.

PERIOD OF GESTATION OF FRUITS.

It is not generally understood, even by those who cultivate fruits, that under any circumstances of season, whether it be warm or cool, wet or dry, (admitting that the trees are healthy and treated alike,) the time from the impregnation of the blossom to the period of maturity of the summer fruits, is as unvaryingly the same one year with another as the period of *gestation* is, in the various subjects of animated nature. By this it is not to be understood that the same fruits will ripen on the same days each year, because the time of blossoming varies according as the season opens early, or late, and this variation is sometimes as much as four weeks.

These facts have been arrived at and recorded after a long series of untiring observations, we believe, for the first time, by Lawrence Young, Esq., President of the Kentucky Horticultural Society. Mr. Young, in his catalogue of fruits, has given a tabular statement of the time of ripening of such varieties as have come under his observation. These observations, we hope, will be extended until he shall embrace in his list all the leading fruits of the West. The present list embraces some of the varieties of Apricots, Apples, Peaches, Pears and Plums.

In order that this table may be applicable to any year to come, Mr. Young has fixed for this latitude the period of the opening of the season about the 10th of April, and the close about the 1st of October; and where the mean temperature of the three summer months does not vary much from 74° Fahrenheit.

Mr. Young remarks: After the period of impregnation, if the weather is so inclement as to injure vegetable life, the crop is destroyed; if no inclement weather succeeds the period of impregnation, in four or five days there is a visible enlargement of the fruitlets, and in ten days the Apricot and Peach are as large as a pea. Again, in mild and genial seasons, all the fruits, such as Cherries, Plums, Apricots, Peaches, Pears and Apples, bloom very nearly together; Apricots and some Plums first. Apples last, whilst Peaches generally blossom at an intermediate period. The bloom of the Peach is often partially opened for some weeks before the com-

mencement of growing weather; but as soon as warm weather fairly sets in, and the process of impregnation has taken place, the flower petals fall rapidly and at once. For this reason, and because the Peach tree is neither the earliest nor the latest to bloom, its blooming period has been adopted as a basis for calculation in the annexed tabular list; and all that is necessary to fit the accompanying table for any fruit season in a locality with a similar summer season, and a like mean temperature, is this: In any year that the Peach tree casts its flower petals before the 10th of April, the growing season is so many days earlier than that of the table. If, for example, in any year, this fall of the petals should occur on the first day of April, then each order in the whole list of succession would make its appearance ten days earlier than the dates of the table. Should the period of blooming in any year be prolonged, say as late as the 20th of April, then adding ten days to the date of each or any order in the list, will properly indicate its place in the season for such late spring; and so for any year, subtracting the number of days when the blooming period is prior to the 10th of April, and adding when it is subsequent.

No effort is made to include winter fruits in this table; and indeed the present knowledge on this subject will hardly warrant the hope of a successful effort to this end. A truly valuable winter fruit for any locality, must be one that, on the coming of frosty nights in autumn, is not yet mature, but is just sufficiently advanced in growth to fit it for being preserved for a time in a state of torpor, and then when ultimately brought forward, to secure to it a proper flavor. Experience shows that but few Apples, and a still smaller number of Pears, can live over our long summers, and remain fit for storing at the approach of winter; but how few or how many, remains to be settled.

We give a Calendar Index for ripe fruits, suited to any locality where the growing season is from about the 10th of April to the 1st of October, and where the mean temperature of the summer months is about 74° Fahrenheit.

CALENDAR OF THE TIME OF RIPENING OF FRUITS.

MONTH.	DATE.	No. of Order	DAYS OF GESTATION	APRICOTS.	APPLES.	PEACHES.	PEARS.	PLUMS.
June	16	1	67		White June Eating			
	23	2	74		Red Margaret			
	30	3	81		Red Astrachan		Madelaine	
July	7	4	88				Chambor's	
	14	5	95		Queen			
	21	6	102		Black's Annette			
	28	7	109		Fenley			
August	4	8	116		American Summer Pearmain			
	11	9	123		Bohannon of Col. Saunders			
	18	10	130		Fall Pippin			
	25	11	137		Fall Queen			
September	1	12	144					
	8	13	151					
	15	14	158					
	22	15	165					
	29	16	17		Belle Flower			

						Early York	Bloodgood	Long Scarlet and Royal Native
						Early Tillotson	Sugar (Joe Taylor)	Bolmar's Washington
						Coles Early Red	Dearborn's Seedling	Dunne's Purple
						George IV	Tyson and Rostiezer	Jefferson
						Pope's Cling	Julien	Prince's George
						Van Zant's Superb	Herr's Bell Pear	Lombard
						Hill's Redman's Cling	Andrews	Smith's Orleans
						Yellow-Red Rareripe	Doyenne Boussock	Columbia
						Red Cheek Melacaton	Leopold	Victoria
						Catharine	Bartlett and Flemish Beauty	Coe's Golden Drop
						Crawford's late		
						Pavie Pemponne	Belle Lucrative, or Foudante d'	Yellow Egg
						Red Pine-apple	Autonne	
						Grand Admirable	Seckel and White Doyenne	Cooper's Large Red
						Columbia		
						Whitehead's Red Heath	Burre Bose	
						Freestone Heath	Louise Bonne de Jersey	
						Late Heath	Beurre Diel	
						Lagrange		
						Smock's Free		
						White's Favorite		

Removing Trees from the Nursery before the Leaves have Fallen—Facts in Vegetable Physiology.

In the extensive nurseries in the North, in order to dispose of the numerous orders that are received in the fall, it often becomes necessary to commence digging and packing trees for transportation immediately after the first severe frost has occurred, and before the leaves have had time to separate from the branches.—Under these circumstances all intelligent and careful nurserymen strip off the leaves as soon as or before the trees are dug in order to prevent injury and death, which would necessarily result from the evaporation from the leaves, when the roots no longer possess the power to supply the waste from this source.

We are induced to refer to this subject from seeing in the street a few days since a full wagon load of newly dug peach trees, of large, vigorous growth, containing nearly the full summer supply of leaves.

From the time the leaves begin to expand in the spring until they separate from the branches in the fall, after severe frosts, an immense amount of water is daily evaporated from the surface of the leaves. This evaporation stands in a fixed ratio to the temperature and hygrometic state of the surrounding atmosphere.

When a tree is removed it is always done with the loss of a large proportion of the thousands of minute spongioles, or rootlets, which alone are the mouths or openings through which the supply of this waste by evaporation from the leaves is received.

The motion of sap in growing plants, is produced by the evaporating surface of the leaves alone, and when the roots, after removal from the soil, fail to supply this draft made upon them, it is at the expense of the vital principle of the tree. Nor is this loss of the vital principle confined exclusively to the evaporation of the leaves. Peach trees particularly, which often make a growth of six or eight feet in height the first season from the bud, the wood is more or less succulent and immature, and unless the branches are shortened to within two or three buds of their base, when the tree is transplanted, more or less injury will result from the evaporation of the branches.

Trees that have been removed without shortening the branches sufficient to establish an equilibrium between the supply of sap from the mutilated roots and the evaporating surface of the newly formed leaves in the spring, are sure to linger through the season without making but little growth, if they do not entirely die. Thousands of trees are annually lost from this cause.

The proof of these facts dates back as far as the days of Newton, and which were confirmed among the numerous interesting experiments made in vegetable physiology by Stephen Hales, more than one hundred and twenty years ago.

In the beginning of his work Hales describes the experiments which he made on the motion of sap in plants in consequence of their evaporation in branches covered with foliage, in cut plants as well as those still provided with roots. He shows, by the following experiment, the influence of the mechanical pressure of a column of water, with and without the help of evaporation.

Hales, in one of his experiments fastened an air tight tube, seven feet long to a branch of an apple tree containing its twigs and leaves. This he immersed in a large vessel of water, and also filled the tube with water; in two days the pressure of the water in the tube had forced the fluid into the branch until it sunk in the tube 141-4 inches.

On the third day he took the branch out of the water and exposed it to the free evaporation of the air. The water in the tube fell, in twelve hours, 27 inches.

To compare the force with which water is driven through the vessels of the wood, by pressure alone, with that produced by pressure and evaporation, he joined an apple branch, six feet long, with leaves, and exposed to the air with a tube nine feet long, which was filled with water.

From the pressure caused by the column of water, and by evaporation going on at the surface of the twigs and leaves, the water fell, *in one hour*, 36 inches. He now cut off the branch thirteen inches below the tube, and placed the portion cut off (with the twigs and leaves) vertically, in a vessel of water. This last absorbed in thirty hours, eighteen ounces of water, while the portion of water remaining in connection with the tube, which was thirteen inches long, only allowed six ounces of water to pass, and that under a pressure of a column of seven feet of water.

Vegetables (which are inanimate) have not an engine, which, by its alternate dilations and contractions, as in animals, forcibly drives the blood through the arteries and veins; yet nature has wonderfully contrived other means most powerfully to raise and keep in motion the sap.

Hales in his XXI experiment exposed one of the chief roots of a pear tree in full growth, at a depth of two and a half feet, cut off the point of it and connected the part of the root left in connection with the stem, with a tube which he filled with water and closed with mercury.

In consequence of the evaporation from the surface of the tree, the root absorbed the water in the tube with such force that, in six minutes, the mercury rose to eight inches in the tube.—This corresponds to a column of water nine feet high.

"By comparing," says Hales, "the surface of the root of plants with the surface of the same plants above ground, we see *the necessity of cutting off many branches from a transplanted tree*, for if 256 square inches of root, in surface, was necessary to maintain this plant in a healthy, natural state—suppose upon digging it up in order to transplant it, half the roots be cut off, (which is the case of most young transplanted trees,) then it is plain that but half the usual nourishment can be carried up through the roots on that account, and a very much less proportion, on account of the small hemisphere of earth the new planted, shortened roots occupy, and on account of the loose position of the new turned earth, which touches the roots at first but in few points."

Hales made numerous interesting experiments in vegetable as well as animal physiology, with which every gardener and nurseryman should be familiar. They are also interesting to the general reader.

OUR HORTICULTURAL DEPARTMENT.—We have received a private letter from a subscriber in Saline Co., Mo., from which we make the following extract for the benefit of our readers. We will state in this connection and in reply to othportions of his letter, that we shall pay much attention to the Horticultural Department of our journal. We shall ere long recommend such lists of fruit, for general cultivation, as are known to do well in this latitude. Because certain varieties do well at the East or North there is no certainty that they will do well in the West. We shall recommend such lists for general cultivation as have been tested in the West, and are known to do well upon our soil and in this climate. The writer says:

"I consider the production of good fruit as necessary to health and good living, as the production of good wheat and corn; and, if rightly managed, it would be equally profitable to the producer. It should also become equtlly valuable and important as a staple of commerce.—There is no State better adapted to its production than Missouri. And yet, no where else is it so egregiously overlooked and neglected. I believe there is no other locality where the Green Newtown Pippin grows to greater perfection, thand on the limestone regions of Missourl.—There is no apple equal to it for exportation, and it is the only apple that I know, which retains its freshness, and improves from age.

FRUIT INSTEAD OF MEDICINE.

There is no doubt but that the free use of good fruit is highly conducive to health, and indeed, almost indispensable to it. Much of the sickness in the Western country is occasioned by the want of it. It is the great scarcity of good fruit that creates such a demand for physic in our Western country. The various fevers and billious disorders prevalent in the summer season, are more owing to the want of it than to any other cause. And not until fruit is generally cultivated, and used as an article of diet, shall we be rid of these disorders, which are sapping the life fountains of thousands of our farmers annually. And if fruit were administered, in many cases, as an article of medicine, instead of the physician's prescription, we have no doubt it would be far better for the patient.

Nature, in this, as in all other respects, has bountifully supplied us with varieties, which, if properly cared for, will enable us to enjoy a succession throughout the year. But fruit is not only a necessary of life,—it is one of its great luxuries. What is more enticing to the palate than luscious fruit? And as an article of diet, nothing equals it. It is easily raised, costs but little, promotes health, and is liked by everybody. Most people content themselves by cultivating but two or three varieties. This should not be so. Fruit is more needed throughout the summer season than almost any other part of the year. And the varieties which ripen at this time are least cultivated. The farmer cannot take a step which will add more to his own joys, and to those of his family, than by having such a successsion as will furnish him with fruit the entire year.

First on the list in spring time, comes the delicious Strawberry. But a little spot of ground is requred for its cultivation for the use of the family. Its healthful qualities are well known. Cities well supplied with it are remarkably exempt from disease while the strawberry season lasts. We have accounts of wonderful cures, effected in ancient times, by its use. There are many varieties, but it is not our purpose to note the best of these at this time.

Net in order, comes the Raspberry—a most excellent fruit, and indispensable to every family. Then follows the Blackberry, the Cherry, Currants and Gooseberries. Then comes the Apricot, the Peach, the Nectarine and the Plum. Apples and Pears also commence ripening early in summer, and the winter varieties if properly stored, may be kept till the appearance of fruit the next season. Who will not have this

succession. How much it would add to home happiness!

For the Valley Farmer.

AUGUSTA, Mo., Dec. 12, 1855.

EDITORS OF THE VALLEY FARMER:—

You requested me to state, in an article for the *Valley Farmer*, which: in my opinion, were the best vurities of apples for general cultivation in the West. If winter varieties, the Jeneton, or, as others call it, Rawles Janet, is, I think, for Missouri, the variety that combines more of the desirable points than any other. A proof that the most of the farmers think so too, is that almost every order for Apple trees, exceeding the number farmers want for family use, consists chiefly, often entirely, of that variety. The Jeneton Apple is of good medium size, form, a flattened cone, color red, and red streaked on yellow ground, taste juicy and spicy, aromatic flavor, eats well from the time of gathering; is in its prime in January; keeps well. I commonly have sound specimens of *it* in July. If bruised, the injured place becomes spongy, but does not spread decay. This proves that the substance of the Jeneton Apple has been converted, in a great degree, into saccharine matter. The tree is a good grower, forms a regular shaped top, the limbs put out from the stem in a quiet, particular angle. It blossoms latest in the spring, so its bloom is hardly ever injured by late frosts. This circumstance procured for the Jeneton the praise-name of Never-fail; in spite of it, a frost on the night of the 8th of May injured the bloom of the Jeneton this season.—The tree sets the fruit-buds all over the limbs. By this means it can bear a great weight of Apples without breaking. Jeneton Apples are more saleable, in large lots, than any of the fashionable varieties.

We have a great many other varieties of winter Apples that have a just claim to excellence, but the Jeneton above all.

Of fall varieties, I value, particularly, the Milam, Rambo, Bellflower and Fall Pippin.

Of summer varieties, I think the Juneating, Yellow Harvest, Early Red Margeret, and Summer Redstreak, to be all very recommendable. My Smith's Summer is the most suitable Apple for drying I know of. The Maiden's Blush is a very good apple, and the tree thrifty and a good bearer.

In making the above list, I aimed to call the attention of the public to the best kinds only.

Very respectfully, your
most obedient servant,
JULIUS MALLINCKRODT.

VINEYARDS IN GEORGIA.

A letter is published in the *Augusta Constitutionalist* from Hon. H. A. Miller, giving a description of the Vineyards he visited in Wilkes county, belonging to Dr. Anderson and others. In the spring of 1853 the slips were planted, and they now bear abundantly and the quality of the grape is most excellent. Mr. Miller says:

"Each vine has on an average forty-five clusters of the very largest size, the flavor of which surpasses anything I have known. The vineyard was an experiment of one-fourth of an acre, with a setting of 250 vines per quarter, or 1000 to the acre. Owing to dry weather only 130 lived and are in bearing.

"I am not premature in the conjecture that in ten years more the wines of Georgia will meet those of France at our Atlantic ports, and soon thereafter they will make good the competition by going to the European markets; so that what has just been achieved by her flour mills and farmers will also be effected by her vineyards and wine presses."

CULTIVATE MORE FRUIT.

We are daily increasing in the desire to extend the production of fruit. Aside from the improvement in health which would arise from a greater consumption of fruit, replacing a portion of the grosser animal and vegetable matter which now constitute so large a quantity of our daily food—aside from this, we say, the present exorbitant prices paid for other food should be an incentive besides the great mass of foreign fruit which is now consumed among us could be replaced by that of our own production of much finer quality, and at cheaper rates. Why is it that so many hundreds of families, living in the country, and having every facility for fruit production should still continue to subsist on the commonest food, requiring a greater area of its growth? A single acre of ground may be made to yield a continued succession of strawberries, currants, gooseberries, raspberries, plums, apricots, peaches, nectarines, and grapes—not only giving a great variety, but the *finest quality in sufficient quantity* to answer the reasonable desire of any fair sized family. Again, there are thousands, nay, millions, of apple trees, which are now bearing the most common vinegar producing apples, most of which are capable of being brought into bearing valuable varieties of this important fruit. Vigorous apple trees of any age will amply repay the expenditure of a little time and money, in placing a few grafts of the most desirable kinds of fruits in the young, thrifty limbs, which will come into bearing in the course of two or three years.—All the limbs of the tree should not be cut back at once, as it would be too great a check to its growth. About one half may be removed at the first operation, which should be performed in early spring, when the bark will separate most readily from the wood, the grafts having been procured in autumn and buried in damp sand, tow, sawdust, or moist earth, in a cool cellar until required for use. After the graft starts, keep down all suckers by rubbing them off with

the hand while still small, and remove the large branches which would be likely to draw too freely on the energies of the limb bearing the graft, thus preventing the latter from receiving all the nourishment it requires. Should the tree show any sign of premature decay, though it still have thrifty growth in many parts, the old bark should be removed by a wash of potash or soda solution in water, which causes the useless portions of the bark, to soften, separate, and fall off, while all the eggs of insects are thus destroyed and the tree left in a cleanly state.—Crowded and dead branches should be all removed, and when they are an inch or more in diameter, the wound should be covered with a solution of gum-shelac and alcohol, which will keep out all air, moisture, etc. Hundreds of trees are rendered a mass of decaying matter from the slightest exposure, caused by cutting off a few large branches roughly, and afterward failing to protect them from atmospheric influences. Of the washes referred to above, by far the better, safer one is the soda solution, made by dissolving one pound of bleacher's No. 1 soda in a gallon of water, and applying the result with a brush or mop to the surface of the tree early in spring. Sometimes a second coating is required, but one is sufficient to effect the desired purpose. In many places it is impossible to procure the No. 1 soda. Common soft soda of the shops may be heated to redness over the fire, which drives off the carbonic acid combined with it, and leaves the soda in a caustic state, which may then be used in the same manner as the No. 1 soda, and will effect precisely the same results.

The soil of the base of the tree should be well disturbed, and if the sods are very stiff they may be removed to a convenient locality and mixed with a quantity of caustic lime, or of the "salt and lime mixture"—may be allowed to undergo decomposition, and the result finally returned to the former location. The disturbance of the soil should be followed by an application of lime about the tree. Oyster-shell lime is the best for such use. A peck may be employed for each tree. No fermenting manures should be added to the soil preferring those manures from the decay of leaves, woods, mold and similar materials, mixed with lime and ashes, which will afford to the tree all the materials which it requires, except phosphoric acid, which is obtained by sowing on bone dust; or, what is better, using a dressing of super phosphate of lime, which should be placed within a distance of five feet from the tree (30 lbs. to each one) over the whole surface, and worked into the soil, unless some crop be cultivated in the spaces between, when it may be used at the rate of 500 lbs. per acre for two seasons in succession. The soil should be thoroughly cultivated in some low hoe crop for two or three years, till the trees are thrown into the best condition, when it may be seeded down with orchard grass without grain. The latter should never be grown in orchards, particularly buckwheat, which is very injurious to the prosperity of an orchard. The future care of the trees will consist in carefully pruning out every injured branch, rubbing off suckers as they appear, and plucking the delicious fruits which they shall bear under such treatment. One hundred trees treated thus will repay the owner better than one thousand left to care for themselves in the ordinary manner. In future articles we will give our readers some idea of the quantity of fruit grown in the United States, and also the amount imported from foreign countries, as well as continue directions for the cultivation of fruits of all kinds—not on fanciful methods, but those modes which have been pursued by some of the very best cultivators.—*Ex.*

THE ASPARAGUS BED.

"How shall I get an asparagus bed?" asks one of our subscribers. We will try and give the information desired.

To begin with the beginning—the seed may be sown in autumn or early in the spring, in a good loamy soil. Select good and ripe berries, put them in water, and when slightly fermented, the seed can easily be washed from the pulp and dried. One ounce will grow a thousand plants. Sow in drills an inch deep, about one foot apart and cover with fine soil, pressed down lightly Keep the weeds out, stir the soil often, and thin the plants to six inches apart in the drills. At one year old select the best and thriftiest plants to form your bed.

The asparagus bed should be open to the morning sun. And it is better if protected from the north and east, yet open to light and air.—It should be very rich, and on this, more than anything else, depends the amount and value of the product. Dig up a loamy, porous soil two feet deep, intermixing largely and thoroughly with manure to within six inches of the top; this should be filled with garden loam. Then take the young plants from the seed bed—injuring their roots as little as possible—and carefully set out in rows two feet apart, one foot apart in the row. Then cover the bed two inches deep with dark colored soil, made as by a mixture of charcoal dust or muck, and sprinkle salt until the surface is white again. This will keep down the weeds and promote the growth of the asparagus, which, it should be remembered, originated on the sea shore.

In autumn remove the dead stalks and cover the bed three inches deep with stable manure to be forked in the spring, with another dressing of salt. Let the stalks grow the first and second year without cutting, that the roots may get well established; the third year the asparagus will be fit to cut, and will with similar treatment each fall and spring—with perhaps a slight addition of earth to prevent the roots from coming too near the surface—continue to yield well for many years.

Remember, room, a rich, warm soil, moist, but well drained, and salt enough to prevent the growth of weeds, are peculiarly beneficial to the asparagus plant. With these, and good care, one cannot fail to have that inmate of all good gardens an asparagus bed.—*Rural New Yorker.*

Those who neglect the cultivation of the best kinds of fruit deprive themselves and their families of a great and most healthful luxury.

OHIO POMOLOGICAL SOCIETY.

The proceedings of this society, which held its annual meeting at Columbus, Ohio, at the time of the State Fair, the past fall, have not yet been published. The society adjourned to meet at Cleveland, on the second Tuesday of January, for the examination of winter apples and pears. After the meeting of the society at Cleveland, the proceedings and discussions at both meetings, will be published in pamphlet form. Upon the reception of this pamphlet, we shall lay before our readers whatever will be of interest to western fruit growers.

FRUIT IN THE WEST.

Mr. P. Barry, the former editor of the *Horticulturist*, attended the Fruit Grower's Association, which was held at Burlington, Iowa, the past fall, and delivered an instructive and interesting address on the occasion. In a letter te the *Horticulturist*, he thus speaks of Western fruits in comparison with Eastern:

"I have never been taken so much by surprise as I was in visiting some of the gardens around Burlington. My curiosity was awakened by some specimens sent into the exhibition rooms of the Fruit Grower's Society. *Beurre Diels* weighing a pound and a half; *Swan's Orange* about as large; *Louise Bonne de Jersey*, and *Vicar of Winkfield*, enormous. Some monster *Bartletts* had been preserved in ice. Such a sight in the way of pears I have never seen, and I at once resolved to visit the trees and know all about them. Dr. Tallant, to whom I feel greatly indebted for many kind attentions, immediately conducted me to the garden of W. F. Coolbaugh, Esq., the well known Banker of Burlington.

His residence is on the top of the bluff, and his garden contains scarcely an acre—there I found the pear trees—beautiful pyramids, all on quince plants about 7 or 8 years, now 8 to 10 feet, or 12 feet high. The early varieties were of course gone, but I found on the trees Beurre Diel, Beurre d' Anjou, Vicar of Winkfield, Glout Morceau, Beurre d' Aremberg, and others, all nearly twice as large as good specimens grown in New York.

These trees were remarkably vigorous, and hang full of fruits—the ground was merely kept clean. One tree of Glout Morceau was blighted.

Dr. Tallant took us next to his own garden, which is situated in that part of the city which I have described as being in a basin. The garden is small, but filled to overflowing with the choicest fruits and flowers, and all in the finest possible condition.

His pear trees are still finer than at Mr. Coolbaugh's, and the specimens still larger. *Brandywine* I observed a noble tree, and the Doctor told me that it bore specimens that weighed a pound! The trees were the same age and the varieties much the same as Mr. Coolbaugh's.—Quite near to Dr. Tallant's we were shown a garden which was formerly owned and planted by his Excellency Gov. Grimes; planted at the same time as the others. The trees looked well, but had not received proper care latterly.

The nursery's are no loss wonderful. I observed apple trees one season's growth from the root graft nearly 6 feet high and stout in proportion.

The exhibition of fruits made by the society was a splendid one. I really mean *splendid*, especially in apples. About 300 feet of tables were loaded with heaped up dishes of monstrous fruit. You must pardon a free use of adjectives.

In one collection, that of Mr. A Hillary, I should think that specimens ranged between 18 and 25 ounces, and fair as wax work.

Yellow Belle-flowers, Ortleys, Maiden's Blush, Rambo, Fall Pippin, Vanderveer, &c., so large that I barely recognize them.

The large hall was most tastefully and conveniently arranged. There were between 40 and 50 contributors from Iowa, Illinois, Wisconsin, and New York. I have never before seen so large a collection of fruits gathered together from so wide an area; from this you may judge how novel and instructive it was.

Training of Trees.—The editor of the Horticultural Review, says:

"Trees with low heads do bear sooner and better, and will bear longer, than whip stalks and bean poles. In our prairies, low headed trees are the only ones that can hold up their heads, or hold on their fruit. They are naturally shaped fruit bearers, and they are miserably unpopular with that class of purchasers who 'know more about trees than the men who raise them.' This is a most important subject, and fruit growers will never repent but once, if they prune their trees up high. Like most tyros, we began so too, and it had inflicted one perpetual sorrow upon us. The low tree is healthier, not subject to affections of the bark or insects, not injured by winds, the fruit is easier gathered; in fact, every reason is in favor of low growth. We now try to form a head not higher than three feet from the ground, for apples, letting the branches grow out."

TANSEY AND PEACHES.

A writer in the New York *Times* recommends sowing tansey about the roots of peach trees as a means of preserving them. He says that he once knew a large peach tree, which was more than forty years old, while several generations of similar trees in the same soil, had passed away. This led to examination, and a bed of tansey was discovered about the trunk. It was naturally inferred that the preservation of this tree to such a green old age was attributable to the presence of this plant. It was decided to try the experiment on others, and accordingly, a few of the roots were placed about each of the other trees on the premises, some of which gave signs of decay. Not only has it preserved them for several years, but renovated those that were unsound. The odor of this plant, he says, doubtless keeps off the insect enemies of this kind of tree, and it would have the same effect on others as the plum, apple and pear, as well as the elm, sycamore, and other ornamental trees.

The Home Circle

HOME FRIENDSHIP.

Our best friends are at home. Those who love us best, who would do most for us, who are most interested in our lives and would weep the bitterest tears were we to die, dwell under our own roof, eat at our own table and sleep under the shadow of our own protection. How then should we feel towards them and treat them? If they are our best friends we should be theirs, and if we are their friends we should show it. Concealed friendship does not do us much good.

If a mine of gold is on our farm and we know it not, we are not much better off for it. Many people have a strange way of showing their friendship to the members of their own home circle. They are exacting, cross, surly, fretful and hateful in many ways, and all this to friends they really love. They mean no harm, they mean not to break the cord of friendship, or mar its sweet symphonies. But somehow forget that home friendship should be treated more delicately and kindly than any other, because it is better and more immediately affects our happiness. It should be one of the constant objects for which we should live, to respect and improve, deepen and strengthen the home friendship. In this we live. It is the fountain of our sweetest pleasure, our best life. Into this fountain no bitter drugs, no poisonous drops should be put. We should keep it clear and pure. We should cherish it as the apple of our eye. No work or act of ours should disturb it. What is so dear to us and so essential to our happiness, should be preserved at all expense. Home friendship is our richest treasure below the skies. It is better than gold, rubies, lands, fortune, learning. fame or power. Nothing of an earthly nature can compare with it. Then we should treat it as our best treasure, and be true to it, if we are false to everything else. Every member of the home circle should be a faithful friend of all the rest and show his friendship by friendly words and acts.

ECONOMY.

Say what we will, economy is one of the very best home virtues, and one which is every where needed. No matter if people are rich or have large incomes they should be economical. To waste is wicked. There are better ways to spend money and goods than to waste them. It is the poorest use they can be put to. Many people would be economical if they knew how. It is an art to practice economy. To do it well, one must know the art. All can have it if they will. It is an arithmetical art. It is the conclusion of numbers. All must live, and ought to live well, but how to live best with the least expense is the work of figures to tell. We must count the cost of ways and means and compare them. Many people use expensive articles of food and dress, when cheaper ones would be every way better and more serviceable. Especially in relation to table expenses is there a great want of economy. A little useful information concerning the qualities of food, the amount and kind of nutricious matter they contain, the wants of of the human system and the best ways of cooking, would often save fully one third and in many instances half the expense. A wise economy in table expenses is favorable to health, and in this way saves time, drugs, expense and doctors bills, strength, flesh and happiness.—The whole system of greasing and preparing, and what is called enriching food, is expensive, unhealthy and useless. Fat, oil, tallow, and every oleaginous substance can be put to a better use than greasing food and diseasiug the digestive economy. We have just read article in a New York paper which we deem worthy of every body's attention. We hope it will be read in many home circles.

Hints for Large Families with Small Incomes.

Food is still dear, despite the abundant harvest. Winter is coming on, and many families will have pinching times again. In view of these facts, a writer in the *Tribune*—we presume it is that kind-hearted gentleman and true friend of the poor, Solon Robinson—gives some useful hints to those who are obliged to make a little go far. He says, and truly, that we eat too much meat, and the wrong kind of vegetables, and that we cook in a senseless, extravagant manner. The following are some of his suggestions toward a better system:

"Oat meal is excellent in porridge, and all sorts of cooking of that sort, and oatmeal cakes are sweet, nutricious, and an antidote for dyspepsia. Just now, we believe oats are the cheapest of any grain in market, and it is a settled fact that oats give the grertest amount of power of any grain consumed by man or beast.

"This cheap food only needs to be fashionable to be extremely popular among all laborers, all of whom, to say nothing of other classes, eat too much fine flour bread.

"Cracked wheat and loaf bread cost the same price, or perhaps a less price for the wheat by the pound. A pound of the wheat, properly cooked, is worth more than four loaves of bread.

"Hominy, samp, hulled corn, we have so often recommended and urged upon the attention of all, both rich and poor, as cheap, wholesome, nutricious food, that we have induced many to try it who would not give it up now under any consideration. We reiterate all that

we have ever said in its favor. Thirty years' experience in its use only serves to confirm us in the opinion that it is such excellent and economical food that too much cannot be said in its favor. The only thing necessary in its cooking is to cook it enough—it cannot be cooked too much.

"Every family should eat beans and peas, because of all articles they afford the most nutriment for the least money.

"One pound of cheap meat, say at ten cents, and one pound of split peas, say five cents, will give a fuller dinner to a family than a dollar expended for beaf, and steak, and white bread. This is a kind of economy that should be known and rigidly practiced.

"One bushel of white beans will feed more laboring men than eight bushels of potatoes. The beans will cost two dollars, the potatoes six.

"A single quart of beans costs nine cents; a half pound of salt pork, six cents; a pound of hominy, five cents; and that will give a meal to a larger family than a dollar's worth of roast beef, white bread, potatoes, and other vegetables.

"We would not confine the laborer or the poorest family to this cheap food; but we do insist that it is their duty to substitute such food occasionally in place of that which is more expensive, and thus, by saving, lay up a few dollars in the savings bank to save themselves from the mere life-saving contrivance, the soup house.

"We hope never to see another of these pauper-making establishments in operation again in this city. Let men think twice before they open another one.

"But let every one think of the economy of making a soup-house at home. We spoke of pea-soup. Is there any living witness of that good old Yankee dish of cheap food called bean porridge? Let it be revived in every family; among the rich as a luxury, and among the poor as an article of economy.

"There is another Yankee dish besides bean-soup and baked beans that we should like to see revived, and that is the baked Indian meal pudding; and this brings us to Indian bread, a mixtusd of two-thirds corn meal and one-third rye meal, not rye flour, which makes most delicious bread at less than one-half the cost of wheat flour."

YOUNG MEN PAPERS—No. 1.

Young man, you are the hope of your country, the promise of this generation to the next. Permit a statement of some of your relations, circumstances and duties. We would talk with you as to a brother or son. We would say to you what we would say to our own heart. We would be a father and bequeath to you our possessions. What science, experience, observation, travel, study and a careful reading of books, men and thiugs have given us, we would give to you. We give it freely. Will you so accept it? If so, give attention to this series of papers. We give them to you as our best and only wealth—what we have treasured in laborious years.

Who are you? We ask not for your name. That is a small matter Birds and animals, plants and rocks have names as musical and high-sounding as yours. There is not much in a name. Mean things sometimes have noble names. Mean men are called Washington, Franklin, Columbus. But these great ones mantles do not descend in their names. Names are made of letters, you are made of better stuff we hope. It is not for your name then we ask but for you. Who are *you*? Not a brute we trust, not a mere animal. It is true you have the qualities of an animal nature. You have a body subject to the same laws as animal bodies. You have propensities and appetites such as animals have, and these appetites and propensities are to be respected and treated well. They are to be the servants of your inward household. They are to work for you, do your bidding, afford you strength, health, pleasure and energy. All this they are to do and will do, if you keep them servants. But if you let them become masters, woe to you. Greater tyrants never lived.—Meaner, baser wretches, never swung a rod over a human back. They will steal your money; rob you of health, poison your body, defame your reputation, corrupt your character, stultify your mind, harden your conscience, degrade your affections, destroy your peace, tarnish your honor, unmove your soul, brutalize your nature, destroy your life and consign you to an ignoble grave. Animal masters are brutal and base.—A young man had better lie down in his grave than let his appetite and passions become his masters. They will whip and drive him about till they will beat out his manliness. They will work well and be very useful as servants, but will never do for masters. They must not rule. We must not obey them but they must obey us. You are somethlng more than an animal. That something more is you. That is the man within. That is the master, the ruler, guide, judge, teacher and absolute dictator to all your appetites and propensities, to all that is animal.—The animal must wear the yoke and the harness. The man must put them on and set them in their places. Shall the man wear the yoke, bow his proud head to its burden and work to gratify appetite and passion? Thousands of men do it. Drinkers, gluttons, passion-gratifyers and propensity-feeders do it. And still they would be called *men*. But men rule themselves. Men guide their lives by some wide rules, by principle, by enlightened reason and conscience.

Are you to be the man or the brute? Are

you to give reason or propensity the sway?—Are you to rise up in manly dignity or sink down to dishonor? All will depend upon the settlement of the question, "who are you?"—If you conclude that you are animal and will live an animal life and be satisfied with it, then your course is downward. You will be what you conclude you are. You will not rise much above your own estimation of yourself. But if you conclude that you are a man, with an intellect to be taught, capable of all that is grand in science, great in life, sublime in judgment and wisdom, with a conscience capable of obeying the laws of God and man and directing your life-course high among manly men, among the great and good of earth, with affections pure as the sunlight and sweet as the arena of flowers, and which may bind you in the dulcet meshes of domestic delight, and charm you with the music of their flowing joy, and that these shall be well cultivated and guide you in life, by their best wisdom and holiest sanctions, then you will indeed be a man; you will be but "a little lower than the angels," and live a life of which the angels cannot be ashamed. Such an estimation of ones-self is necessary at the beginning of life. One must appreciate the greatness and excellencies of his nature, must understand how nobly God has endowed him, and what are the powers of his mind and heart which should ever guide him in life. He should not be proud, self-conceited, vain, boasting. But he should feel that he is a man and is determined to live the life of a man. Ae should feel that he is the child of God and should be godlike in his life and actions. Do you feel that you are such, young man, and have resolutely determined to live a high-minded, honorable, and useful life? Then there is hope for you. Go nobly, bravely on.

LADIES' HEALTH VS. FASHION.

A sensible correspondent of the *Home Journal* thus writes on the subject:

"Would that the women of America would arouse to a consciousness of the responsibility resting upon them, and firmly discountenance any demand of fashion, which can seriously affect their health! Of what consequence will it be some twenty years hence, whether they strictly conform to its every caprice or not? But if, by so doing, their health is injured, how fearfully will they then see the sad effects of their mad folly, not only in themselves, but, it may be, in their children also. 'In a word where we begin with mothers,' it is not asking too much that they should see that their own duty is accomplished.

"Look at the sterner sex, who, though they vary their own dress as fashion dictates, seem to have a more sensible leader to follow; for, in what particular can you find them sacrificing their demands? They may wear "continuations of the Vesuvius pattern," coats long or short waisted, yet they are careful to dress so as to keep warm and dry.

"Look at their feet! You do not see one in a hundred venture forth in damp, chilly weather with a thin-soled cloth boot. No! they wear boots with thick soles and high heels; while, on the other hand, you will not see one woman in a thousand, who, when the rain is not pouring, but when the pavement is only damp and cold, wears anything thicker than a single-soled prunella gaiter? If you doubt my assertion, go look for yourselves at the thousands who walk in our crowded cities.

"Now I ask why is it so? Why is there such a difference? Is it that women are inferior to men in the possession of good common sense; or is it that they dress in this absurd manner to please the eye of man? If so, he must bear some of the blame; if, instead of boldly contemning their folly, he encourages them by admiring the beauty of feet dressed in this manner. Let the fair ladies dress as they please in their warm houses, or in warm, dry weather, but, for pity sake, in cold weather, let them find something warmer than a boot which a strong healthy man would not consider sufficient protection for himself from the dews of the summer.

"We are called "the weaker sex;" but judging only by appearances it is a sad misnomer; for what man ever thinks of going out on a cold autumn or winter's day with but a thickness of embroidered lace or muslin over his chest, though underneath a warm out-covering which, every time it is in any way displaced, lets the cool, keen air creep into the very seat of life? Not he! He has his warm coat buttoned up to his chin. He does not go on with flowing sleeves, with a fur cuff to keep part of the arm warm, leaving plenty of room for the cold air to penetrate around the upper and susceptible part of the arm. No; his sleeves are thick, long and warm. And why is it that fashion cannot dictate as suitable a dress for ladies' wear in winter, as she does in summer, when she rarely errs. She might with as much propropriety insist upon our wearing furs and velvet in midsummer, as on our wearing lace chimisettes, loose flowing sleeves, etc., as a promenade dress in winter.

YOUNG GENERALS.—Alexander the great died at the early age of thirty two. Hannibal gained the battle of Canœ at about the same age.—Scipio fought at Zama when not much over thirty. Julius Cæsar had conquered Gaul when he was forty-five. Germanius was poisoned in his 34th year. At the battle of Plassey, Clive's age was not so advanced as that. Napoleon gained his mighty victory at Austerlitz when he had scarcely completed his 35th year; and at the time Wellington finished his campaigns in the plains of Waterloo, he was only 46 years old.—*Home Journal.*

Editor's Table.

TO THE FARMERS OF KENTUCKY AND THE NEIGHBORING STATES.

The want of a well conducted Journal, devoted to the interests of the farmers of this portion of the Great Valley of the West, has long been felt. A number of attempts have been made in Kentucky, and the neighboring States, to supply this deficiency, which have not proved altogether successful.

In the districts where farming is now most profitably conducted, the largest number of Agricultural Journals circulate. The intelligence they convey, of the improved methods of cultivation, the improvements in farm stock, and of the great number of new and useful labor-saving machines that are constantly being introduced, renders it necessary that every farmer should have the means of this intelligence within his reach.

This lack of periodicals devoted to the advancement of this greatest of all industrial pursuits, is not attributable to a want of disposition on the part of the farming community, to sustain them, so much as to the lack of a well directed effort to bring them fully within their reach.

While nearly every other portion of the United States, is abundantly supplied with agricultural papers, there is a large extent of territory, embracing Kentucky, Tennessee and portions of the surrounding States, entirely destitute of periodicals of this kind. In order to meet, in some limited degree, this deficiency, I have for a number of years past, devoted the little time I could spare from my regular avocation, to the management of the Agricultural department of the *Louisville Journal*.

Having been solicited by a large number of the most intelligent farmers of the West, to publish a work exclusively devoted to the farming interests, in a form suitable for binding, and for future reference, I have been induced to withdraw my personal attention from a lucrative business, and attempt to supply this demand.

The "Valley Farmer" has now been published in St. Louis, Mo., for seven years past. The work has been duly appreciated, and well sustained by the farmers in the surrounding country. Missouri and Kentucky, lying in about the same parallels of latitude, with similar soil, climate and products, and in order to establish in Kentucky, beyond a contingency, a work so much needed, it has been deemed advisable to publish the Valley Farmer simultaneously at Louisville and at St. Louis. By this arrangement but little additional cost, for publication, will be incurred, while it will enable the proprietor to add to the work every needed improvement, and to employ the best talent in the west, to contribute to its columns, and thereby render the *Valley Farmer* more useful in every way, and more valuable to the farmers of the west.

Subscriptions and communications for Kentucky, and this section of the west, should be addressed to H. P. Byram, Louisville, Ky.

The office of publication, for the present, is at the Agricultural Warehouse of Byram, Pitkin & Co. H. P. Byram.

Louisville, January 1st, 1856.

OUR JANUARY NUMBER.

We here present our readers with the first number of our new volume. It has been made up in much haste, and amidst the troubles and perplexities incidental to starting a new office. Everything connected with our establishment has just been obtained from the manufacturers.—And we can assure our readers, that it is no small matter to properly fit up and fill up a printing office for the first time. We are glad that we have not this duty to perform every month. It would not be more wearing upon our pocket, than it would be upon our patience. Our time has been chiefly occupied in attending to these matters, since we commenced on the January number. We have not been able, therefore, to give that attention to its columns which it would have pleased us to have done. Hereafter, however, we shall be enabled to devote our entire time to preparing matter for its pages. We shall endeavor to make each number more valuable to the reader than the one that preceded it. We ask for a careful perusal of the present number, and if the reader is pleased with it, we shall be glad to have him and his neighbors also become subscribers.

OUR CLUB RATES.

We hope that our friends and the friends of the cause in which we are engaged, will enlist themselves in our behalf in making clubs for our paper. There is not a neighborhood in the West, but that with a little effort, a club could be formed for the Farmer. We shall be greatly indebted to those who will interest themselves in our behalf, in obtaining subscribers for our journal. By reference to our terms, it will be seen that a considerable deduction is made to clubs. It will make no difference to us whether the subscribers composing the club, receive their papers at one or several offices. We will mail them wherever they desire to receive them.

OUR THANKS.—We return our sincere thanks to our friends in various parts of the West, for their kindness in forwarding us large clubs of subscribers. We are in almost daily receipt of these. We are also glad to see, that in renewing old clubs, many new subscribers are added to the list. Not a single renewal of a club has been made, but that many new subscribers have been added. This is exceedingly gratifying to us, as it is an evidence that farmers are beginning to feel the importance of taking an agricultural journal. At present appearances, our subscription list will be double this year, what it was last. We shall constantly use our best efforts to make it worthy of increased patronage. Published as it is, in the very heart of our country and with no journals, of like character, to compete with it, it ought to have the largest circulation of any agricultural periodical published, and we shall not rest satisfied until it has.

AGRICULTURAL PAPERS FOR PREMIUMS.—The Ohio State Agricultural Society have determined to award several hundred copies of the *Ohio Farmer* and *Ohio Cultivator*, as premiums at their next exhibition. We have been pleased to see that many of the agricultural societies in different States, have adopted the plan of awarding agricultural journals as a part of their list of premiums.

C. M. SAXTON, & Co., have opened a *Farmer's Reading Room*, at No. 140, Fulton Street, New York, where all the agricultural journals published in Europe and America, can be found upon their tables. This will be a fine place of resort, for farmers visiting the city of New York. We hope that none of the farmers of the West, who visit that city, will fail to visit the *Farmer's Reading Room*. Messrs Saxton, & Co., are the most enterprising Agricultural Book Publishers in the world, and are yearly doing more for the cause of agriculture, than any other men, or class of men, in the country. We want cheap and useful agricultural books, and they are publishing such by thousands daily.

☞We call attention to the advertisement of the *British Periodicals*, by Leonard Scott & Co. The beginning of the new year is the best time to subscribe for them. Those fond of periodical literature, cannot make a better investment, than to subscribe for these journals. They are furnished at extremely low rates. See terms.

THE VALLEY FARMER, hereafter, will be mailed to its subscribers on or before the first of each month without fail.

TO THE EDITORS OF PAPERS IN KENTUCKY, INDIANA AND TENNESSEE.

We have embarked in a new enterprise, one that we deem important to the great farming interests of the West. Should you be pleased with the VALLEY FARMER, and its mission, we would respectfully ask from you a friendly greeting.

B.

A HOME AGRICULTURAL JOURNAL—Persons friendly to a *Home Agricultural Journal*, receiving the January number of the *Valley Farmer*, will confer a favor on their neighbors, as well as the publishers, by showing them a copy, and soliciting their subscription. Every Farmer should have an agricultural journal, and it is almost needless to say that Western farmers should have a Western journal.

We intend that each number of the *Valley Farmer* shall be worth a whole years subscription to every subscriber.

THE PRESS.—We return our sincere thanks to our brethren of the press, for the many kind notices they have given of our journal, and for so unanimously recommending it to the support of the farmers of the West. We fully appreciate the motives which have prompted them to this good work. It is not for their own benefit, but for the benefit of our agricultural population that they have recommended its patronage. We are fully sensible of the great advantages resulting from these recommendations, and hope that it may be in our power, at some future time, to return the kindness which has been shown us.

We shall henceforth devote all our time and energies to the great cause of agriculture, and hope to furnish such a journal to the friends of agricultural progress in the west, as will be cheerfully supported.

If our brothers of the press, after a careful examination of the present number, can conscientiously recommend it, as being worthy of an increased support, it would give us great pleasure to have them do so.

We shall endeavor to make our monthly visits as instructive and agreeable as possible.

CONTRIBUTORS.—We are particularly anxious to have subscribers contribute to the columns of our journal. We desire it to be the repository of all that is useful in agriculture, in the region in which it circulates. Give us such facts as you have found to be valuable in your own experience. Every farmer should be willing to contribute his quota, to the common stock of agricultural information, for the benefit of his brother farmers.

To the Agricultural Societies of the West.—We shall be pleased to send specimen numbers of the *Valley Farmer* to all the officers of the Agricultural Societies in the West, and will do so, so far as we know them, and we respectfully solicit them to make our journal the organ of their associations. And if they are pleased with its character and appearance, we would respectfully suggest the propriety of adopting the custom of some of the societies of the country, of offering it in their lists as one of their premiums.

The Valley Farmer is published strictly upon the cash system. The January number will be sent as a specimen to a large number of persons who, if they are pleased with it, and wish to become subscribers, will please forward immediately their subscriptions, in order to enable the publishers to know how many copies of the February number to print, as it will be sent to those only who become subscribers.

Forwarding Subscriptions.—In forwarding subscriptions, persons will please write their names, and the name of the Post Office, County, and State, in full, in a plain hand, so that there may be no mistake.

Registering Letters.—It costs but five cents to register a letter. Where any considerable amount is sent to us, we would prefer to have the letter registered. And indeed, it would be better to register letters, containing money in all cases, whether the sum be small or great. The subscriber and publisher then have a mutual check upon each other.

Transactions of the New York State Agricultural Society 1854.—We are under obligations to B. P. Johnson, Esq., corresponding Secretary, for a copy of this work. It contains the full proceedings of the State society and of the county societies, together with valuable essays on various agricultural subjects, reports on crops, &c. The premium essays on *practical husbandry* by Winslow C. Watson; on *Agriculture*, by W. P. Prentice, and on Rain, Evaporation and Filtration, by George Geddes, are truly valuable papers. We shall refer to reports of some of the Crops of the Empire State hereafter. B.

Lost Numbers.—We shall take much pains in mailing the *Farmer*, but it would be strange if now and then a mistake did not occur. Any subscriber, failing to receive a number, will be supplied by notifying us of the loss.

REVIEW OF PERIODICALS.

The New York Horticultural Review.—This is a neatly illustrated monthly Journal, of seventy-two large pages, devoted to Rural Arts and the advancement of the science of Horticulture in the United States. We have received the first and second numbers of the work, and we most freely commend it to Horticulturists throughout the country. Each number contains engravings of model cottages, plans of gardens, illustrations of fruits, &c. The mechanical execution is of the first order. It is edited by C. Reagles, assisted by the following gentlemen, eminent for their ability in the science of Horticulture: H. P. Knight, James Snowden, D. W. Ray. Terms $2 00 per annum in advance. Published at 208, Broadway, New York, by C. Reagles.

The Western Agriculturist, and Fireside Companion, has made its appearance upon our table. It is published weekly, in quarto form, by David Ramaley, Pittsburgh, Pa. It contains 16 pages, and is a valuable accession to our Western agricultural papers. Price $2 00 a year, in advance.

The Horticulturist and Journal of Rural Art and Rural Taste.—This excellent Horticultural Journal is published by R. P. Smith of Philadelphia. J. Jay Smith Esq., Editor of the North American Sylva, is its present Editor.—This Journal was transferred from Rochester, N. Y., to Philadelphia, in June last. Every one having a taste for Horticulture, in any of its branches, should, by all means, subscribe for this journal. No periodical, in America, is got up with better taste. It will have a refining and elevating influence upon all who read it.

We shall take pleasure in ordering it for any of our subscribers. Price, $2 00 per year.—The edition with colored plates of fruits and flowers, &c., is $5 00.

The American Veterinary Journal, for Dec., is received. We have before spoken of the claims of this journal upon the farmer. Each number is worth the subscription price for a year. It is the only journal devoted exclusively to the diffusion of veterinary knowledge, in America. It is edited by Geo. H. Dadd, Veterinary Surgeon and published by S. N. Thomson, Boston, Mass., at $1 per year.

Annual Report of the Board of Agriculture of the State of Ohio.—G. S. Sprague, Esq., Corresponding Secretary, will accept our thanks for a copy of this report. B.

NEWS DEPARTMENT.

☞Considerable excitement has prevailed throughout the United States, lately, on account of the rumor of the prospect of a war between England and our country.—The London Times of October 25th, stated that preparations had been made to reinforce the West India squadron, and that several vessels of war had been fitted out for that purpose. It was ascertained, however, that the reinforcement of the West India squadron, was to intercept privateers, which the British Government supposed were being fitted out in American ports to subserve the interests of Russia. Mr. A. Barclay, the British Consul at New York, represented to his government that the bark Maury was being fitted out as a privateer. Upon examining into the facts it was ascertained that she was engaged in the China trade, and that the Consul's suspicions were entirely unfounded.

☞Complaint has been made to the British Government by the United States government, of the British Minister and some of the British Consuls, for taking part in enlisting recruits for the Crimea, in the United States.—The action that has been taken in the matter, has not yet been made public.

SIR JOHN FRANKLIN.—No further doubt remains as to the fate of Sir John Franklin. The report of Dr. Rae is confirmed. It will be recollected that in the summer of 1854, Dr. Rae, the celebrated over-land explorer of the Arctic regions, brought with him a report that the Esquimaux of the extreme Northern latitudes, had in their possession relics of the Franklin expedition. The British government, in order to ascertain the truth of these reports, directed the Hudson Bay company to fit out a party of tried men, accustomed to the hardships of polar life, to explore the region indicated by Dr. Rae. The party was accordingly fitted out, and after great trial and hardship, they reached Montreal Island, far to the north, where their explorations commenced. They there found shoes known to be of English make, with the name of Dr. Stanley, who was surgeon of Dr. John Franklin's ship, cut in them with a knife, The "Terror," a boat belonging to the Franklin expedition was also found, with the name distinctly visible. Iron kettles and other articles, known to be made in England, were also found among the Esquimaux. The party gathered many of these relics, and on the 9th day of August last started homeward, and have just arrived, safely, after having been absent in all about ten months.

☞In Congress, nothing of interest has been done.—The House has not yet organized. Buncome speeches and repeated votings for Speaker, are the entire order of the day. Of course the President's Message will not be delivered until the House is organized.

☞Hon. J. M. Mason has been elected U. S. Senator from Virginia.

☞The second trial of Wm. Arrison, for the murder of Isaac Allison, in June, 1854, at Cincinnati, is now being held. There was much difficulty in obtaining a jury. Great interest is manifested in the trial.

☞Twenty thousand barrels of flour have been purchased by one firm in Detroit, for the Crimea, at a cost of $155,000.

☞The sum of $1,246,95, was collected for the Washington Monument at the polls in New Orleans, on the day of election.

☞A writer in the "Petersburg (Va.) Express" says that $310,000 have been contributed to the Yellow fever sufferers at Norfolk and Portsmouth.

☞During the month of November, 1855, the Illinois Central Railroad company sold land to the amount of One Million One Hundred Thousand Dollars. It is supposed that nine-tenths of the land thus sold, has gone into the hands of actual settlers.

☞The Illinois Hedge Company have set out over two hundred miles of Osage Orange hedge in Tazewell county, Ill., the past season.

☞The Minnesota Company raised 134 tons of Copper on Lake Superior, during the month of October.

☞Since the termination of the Mexican war, ten Generals of the U. S. army have died.

☞It is 977 miles from Pittsburg to the mouth of the Ohio river, with an aggregate fall of 425 feet.

☞We are compelled to omit the greater part of our articles prepared for the News Department for want of space. Hereafter, however, we will see that more room is given to this department.

PLEASE TAKE NOTICE.—Persons remitting subscriptions to Mr. Colman, for the present volume, can, if they choose, enclose the amount due me on old subscription in the same letter. By so doing it will obviate the necessity of writing more than one letter. E. ABBOTT.

FARM PRODUCT MARKETS.

ST. LOUIS MARKET.

ST. LOUIS, Dec. 26.

FLOUR.—We quote for country superfine. $7 25@$7 50; fancy, $7 60@7 75; country extra. $8@8 25; City superfine and extra are held at prices beyond the view of buyers.

GRAIN.—Wheat, choice red and white is selling at $1 55@1 65; fair and prime, $1 35@1 50; lower grades, $1@1 25. Corn is selling at 50@55 cents. Oats range from 40 to 45 cents. Rye, inferior to fair, from 75 to 80 cents; good and prime, 85@90c. Barley, market dull, We quote $1 50@1 65c per bushel.

BEEF CATTLE.—prime and choice stock firm at $6@6 50, with a limited supply; common to fair are plenty and dull from $4 50 to 5 50.

SHEEP are scarce, and range from $2 to $3 50 per head.

HEMP.—Market firm. Fair to good, undressed, worth $135@136 per ton, prime, $140@142; dressed, $190.

HOGS.—Dispatches have just been received from Cincinnati, as we are going to press, (26th Dec.) that hogs are worth 5 90.

LOUISVILLE MARKET.

LOUISVILLE, December 26.

FLOUR—The demand for home consumption, and future delivery is light. A decline has taken place in the price. We quote country superfine at $7 00. Jobbing sales at $7 25@$7 50 for best superfine. Supply light.

GRAIN.—Wheat has declined to $1 30 @ $1 40 for prime lots of White and Red from Wagons. Large sales have been made for home consumption and shipment.—Corn is selling at 35 @ 40 for round parcels, ear and shelled, in good order. Rye is selling at 60 @ 65. Barley has declined. Market dull. Prices $1 15@$1 20 from store. Oats—demand fair—prices 27 @ 30c for round lots.

CATTLE MARKET.—Demand and supply light.—Prices have advanced slightly. Sales of first quality beeves 3½ and 4c gross; fair to good 3 6¼ 3¾c; common 2½ @ 2 ¾c. Sheep range from $1 50@$4 00 per head, as to quality. Hogs dull, sales to city butchers 5 @ 5¼ gross.